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MINISTRY OF AGRICULTURE

MONTHLY REPORT

SEPTEMBER, 1936

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GOVERNMENT OF NORTHERN IRELAND
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MINISTRY OF AGRICULTURE

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SEPTEMBER, 1936.

August made some atonement for the unfavourable weather of July, particularly in the latter half of the month; but, unhappily, the optimistic view expressed in the account of crop conditions at 1st September will now have to be modified following the inclement weather that has since prevailed. Rains which have fallen heavily since the end of last month, have caused further damage to the standing corn crops by lodging and tossing, and added to the difficulties which beset the work of harvesting, which has been slowed up considerably.

A special article on Poultry Keeping in Germany appears in this issue on page 8. This was written by Mr. J. G. Rhynehart, B.Sc., F.R.C.Sc.I., D.I.C., of the Ministry, who was the Northern Ireland delegate, and a member of the British Delegation at the Sixth World's Poultry Congress held at Leipzig, Germany, from the 24th July to 2nd August last. It is hoped that it will be possible to publish further articles relating to the Congress in subsequent issues.

The results of the election of members to represent licensed wholesale dealers of classes A and B on the Egg Marketing Committee to be established under the terms of the Marketing of Eggs Act (Northern Ireland), 1936, appear on page 19 et. seq.

AGRICULTURAL CONDITIONS.

AGRICULTURAL CONDITIONS AT 1st SEPTEMBER, 1936.

The month of August opened showery and cool, and although conditions improved slightly the weather was generally unsettled up to the third week of the month. During the last ten days, however, there was a further appreciable improvement in climatic conditions, and a spell of dry weather with much warm sunshine was a welcome reminder of real summertime. The temperatures during the month were in the main higher than in July, particularly during the latter half.

With more favourable conditions prevailing for outdoor work on the farm much progress was made with harvesting, especially during the second half of August, and this work is now reasonably well forward. The remainder of the hay crop has nearly all been saved, and the greater portion of the oat crop has been cut and stooked. The timely arrival of good weather also facilitated progress with the harvesting of flax, and work on this crop is now well advanced. Unfortunately, the spraying of the potato crop, as a preventive against the spread of blight disease which was generally late in making its appearance this season, was not done as extensively as usual chiefly on account of wet weather conditions, and later on in the month the pressure of work in connection with the harvesting of the flax and cereal crops resulted in many cases in spraying operations being suspended. The disease, which spread rapidly during the warm and damp weather, is reported to have affected a larger proportion of the crop than in recent seasons, and, as a consequence, it is feared that many potato growers will experience considerable losses in yields and the quality of their crops.

The higher temperatures following the rains of July and early August prolonged the growing season; pasture lands remained in excellent condition and have provided plenty of keep for live stock.

Cattle and sheep have made a good thrive during the month, and the bill of health is generally satisfactory despite the fact that cases of "hoose" and "redwater" amongst cattle have been reported and that "footrot" and "maggots" in sheep have proved troublesome.

In regard to purchased foodstuffs, the unsettled state of the market for imported wheat affected the price of other foodstuffs, and prices generally advanced during August, although at the close they had an easier tendency.

Prices of barley meal and maize meal rose during the month on account of a shortage of supplies, but latterly they have cheapened slightly again. Hay is now plentiful on most farms, but the quality in general is below the usual standard.

THE CROPS.

WHEAT.—Most of the early sown fields have been cut and stooked, and the harvesting of the spring varieties of wheat is proceeding. Some fields of the latter crop have been slow in ripening, and harvesting may be delayed slightly on this account. This crop, as a general rule, stood up well, but the rains and storms in July caused lodging of the crop in some fields, and in consequence harvesting work was a slow process in these cases.

On the whole the present position of the wheat crop is satisfactory. Winter sown wheat has been saved in good time and in good condition, and so far as can be ascertained at the moment it would appear that the yield of grain will be up to the average, although the straw may be shorter than usual in some instances. A few cases of the crop being affected with smut disease have been reported.

OATS.—The cutting of this crop has been well advanced and it is estimated that approximately half of the entire crop was cut and in stook at the end of the month. Much "lodging" and "tossing", especially in the case of lea oats caused some losses and rendered harvesting work difficult and slow. This work continued under ideal weather conditions during the latter half of August and many excellent fields of well-headed grain have been harvested. The average yield will, in all probability, be of average dimensions. Only small lots of last season's crop of white oats were marketed during August, and prices were a little easier on the month and ranged from 5/- to 6/- per cwt.

BARLEY.—Many fields of barley were badly "laid" by the rains and storms of July, but the warmer and drier weather of August helped the crop considerably. Good progress was made with the harvesting of the crop during the ideal weather of late August. As a general rule the grain is well headed, but in some exposed districts many heads have broken off the straw.

FLAX.—The pulling of flax was almost completed last month. Many crops were badly twisted and difficult to handle, but very good progress was, nevertheless, made with harvesting operations.

The greater portion of the crop has been "watered", spread and dried, and put in sheigs, whilst in some early districts scutching has commenced.

It is anticipated that the average yield of fibre will be up to average dimensions.

MANGELS.—This crop has done moderately well, and is in fairly good condition. There are many good fields of mangels, but the general opinion is that the yields will be below the normal in consequence of the cold and damp weather of the past season. Many crops are in a weedy state, thus showing the effect of the season on the prevalence of weeds.

TURNIPS.—In most fields the prospects of a good crop of turnips are only fair and it is considered that the yields generally will be lighter than usual this season unless a continuance of drier and warmer weather conditions effect a marked improvement from now until pulling commences. In the case of late sowings and in fields situated in heavy soil areas where scalding resulted from the water-logged conditions, the returns will be disappointing. As in the case of mangels the effects of the wet weather are to be seen in the weedy state of many crops. Nevertheless, there are some good fields of turnips which promise to give satisfactory returns.

POTATOES.—The accounts to hand as to the condition of this crop vary to a considerable degree. The early varieties have so far given satisfactory returns, but the prospects of the main crop varieties are in the view of the majority less favourable. Blight disease, which was late in making a general appearance this season, spread rapidly during the first three weeks of August, and although the drier conditions later helped to keep it in check, the extent of its ravages is larger than usual. The weather of July has been the chief cause of its widespread occurrence since the rains prohibited effective spraying measures being carried out in time.

It is considered that with the considerable damage caused by blight and the losses accruing from rotting among tubers in the low-lying and heavy soil areas the total losses will be appreciable this season. It is also reported that some fields have ripened rather rapidly, whilst in a few instances some plants have commenced a second growth. Most of the crop has, however, ripened at a normal rate.

The digging of early varieties and, in the latter period of August, of main crop varieties, was attended with satisfactory results, the yields and quality of the tubers being generally good. The trade for potatoes, however, remained dull during August and prices for the rapidly decreasing quantities of early varieties offered at local markets eased further to around 3/- per cwt. Large supplies of the main crop varieties were marketed during the second half of the month, and opening prices, which were depressed by the glutted state of markets improved at the end of the month to 3/3¾d. per cwt., but later cheapened to 3/0¾d. per cwt. during the week ended 5th September.

HAY.—The harvesting of this crop was almost completed during the favourable weather of late August. In late districts both upland and meadow hay

grew out well and have been saved in good condition, but elsewhere only meadow hay harvested during the summer weather of late August has been saved in really good condition. The bulk returns of both upland and meadow hay are stated to be generally only slightly lower than for last season, but the quality in most cases is below the usual standard although a fair amount of meadow hay, saved in August, is reported to be of good quality.

Seed hay has given fair returns as regards the straw and seed, but the quality generally is only medium.

About half of the upland hay crop has been carted to the stackyard.

With the arrival of larger supplies of this season's upland hay at markets prices eased during the month and the average price for August was 66/9 per ton as against 70/- per ton for July.

LIVE STOCK.

CATTLE.—Store cattle made a satisfactory thrive during August, and as a general rule their health is good, although there has been a fair number of cattle, principally small stores and calves, affected by "hoose" in some districts, whilst "redwater" has also given trouble. Many cattle were given cake on the grass with a view to fattening before winter.

Dairy stock are in good condition and health. The milk yields have been well maintained during the past month, and this is attributed to the rich pastures and the improved weather conditions. Calving has been normal as a general rule, but cases of abortion have been reported from a few areas.

The offerings of store cattle at fairs last month were generally larger than in July, but trade was adversely affected by the absence of many farmers at harvest work. Although well-finished cattle remained in steady request, trade for other descriptions was slower at cheaper prices, and this was especially noticeable towards the end of August.

The smaller offerings of dairy cattle also met a quieter trade, and only best quality stock were selling readily at recent high prices.

Sheep made a fairly good thrive during the month, but the sodden state of pastures was a deterrent to normal thrive, and also predisposed the animals to attacks of "footrot" which have given a fair amount of trouble. "Maggoting" was very prevalent during the latter part of the month, but as a general rule the flocks were free from serious outbreaks of disease.

Larger supplies of fat lambs at fairs during last month met a better enquiry and prices were firmer. The increased numbers of store lambs for feeding and breeding ewes also were a satisfactory trade.

PIGS.—Fairly large supplies of young pigs offered at fairs met a slower trade on account of the rise in the prices of feeding stuffs, and sales were not so easily effected even at easier rates. Breeding sows of the right type were scarce and in good request at firm prices, whilst the larger numbers of other sorts were a slow trade at cheaper rates. Prices for sows ranged generally from £5 to £10 per head according to age and quality, but in a few cases good quality second litter sows were fetching up to £14 each.

HORSES.—The demand for good horses remained steady throughout August but supplies of these were limited, only those of the poorer type being offered in number. Sales of the better type of farm and draught animals were effected at from £30 to £50 each, whilst those of secondary quality were fetching about £15 to £25 each. Animals of inferior type were available at from £6 to £15 each.

MILK.—The milk yield was maintained at a seasonal high level during August and creameries obtained good supplies. The prices ranged from 3¼d. to 4¼d. per gallon, the separated milk being returned to the farmers.

The average price paid for milk produced in Northern Ireland and delivered to creameries for manufacturing purposes was 4.20d. per gallon for the month of July, 1936, and the Ministry has made equalisation payments at .80d. per gallon in order to bring the average price in respect of this month to 5d. per gallon as provided by the Milk and Milk Products Act (Northern Ireland), 1934.

It should be noted that under the Regulations creameries are required to distribute the equalisation payments in accordance with the butter-fat contents of the milk received from each supplier. Farmers, should, therefore, bear in mind that the actual payments made to them, being calculated on a butter-fat basis, may be at a rate per gallon which may vary below or above the average figure herein notified.

APPLES.

The report of the Ministry of Agriculture and Fisheries on the condition of apples on 27th August last states that crops of Bramley's Seedling and Cox's Orange Pippin are very good to good generally. In East Anglia crops of these varieties are patchy, and in orchards carrying heavy crops much fruit is likely to be undersized.

The following are the index figures for the variety Bramley's Seedling in the principal districts. The figures at the corresponding date in 1935 are shown in brackets. The scale on which the index figures are based is as follows:—

25 or less—very bad; 26 to 35—bad; 36 to 45—poor;
46 to 55—fair; 56 to 65—very fair; 66 to 75—good;
over 75—very good.

Tamar Valley 70-75 (20); Devon 70-75 (26); Hereford 70 (5); Somerset 50 (15); W. Gloucester 65 (10); N. Gloucester 100 (5); Evesham and Pershore area 100 (3); W. Sussex 75 (33); E. Sussex 75 (26); Mid-Kent 80 (40); E. and N.W. Kent 70 (40); Middlesex 63 (25); Essex 70 (15); Cambs. 60 (10); E. Norfolk 75 (25); Wisbech and W. Norfolk 80 (15); Lincs. (Holland) 100 (15).

In view of the reported heavy crops in the south and west of England, it seems likely that the best markets for Northern Ireland apples this season will be located in Scotland and North-Western England.

The position in regard to the Northern Ireland crop of apples is little changed since the last report was issued. As a general rule the fruits are a little smaller than is usual at this time of the year.

THE MARKETS DURING AUGUST.

Pamphrey, marketed in slightly smaller quantities, was 6¼d. dearer on the month at 2/1¾ per dozen, but otherwise supplies of the principal vegetables marketed were larger than in July and prices were easier. Cauliflowers were 10¾d. cheaper at 2/3¾ per dozen, leeks ¼d. cheaper at 5¼d. per bunch, parsley 1d. cheaper at 4¼d. per bunch, carrots 2½d. cheaper at 3½d. per bunch, and parsnips 2d. cheaper at 4d. per bunch. Increased supplies of carrots and parsnips were marketed in Belfast. Farmers' butter was less plentiful than in July, and prices were firmer at 1/1¾d. per lb. for print butter and 10¾d. per lb. for lump butter. Supplies of eggs were smaller than a month ago, and prices moved towards higher levels. Hen eggs were 2d. dearer at 9¾d. per lb. and duck eggs rose by 1/10¼ to 9/5 per 120.

In the poultry markets hens and chickens were less numerous but ducks were double the number marketed a month ago. Hens and chickens were 1d. cheaper at 1/6¼d. and 1/11¾ respectively, whilst ducks were 1½d. dearer at 2/- each. Supplies of wool were smaller than a month ago, and whilst long unwashed wool was ¼d. dearer at 7d. per lb., mountain unwashed wool was unchanged in value at 6d. per lb.

THE COST OF LIVING INDEX FIGURE.

The cost of living index figure at 1st August, 1936, was 46, or the same as that for the previous month. The figure at 1st August, 1935, was 43.

POULTRY KEEPING IN GERMANY.

The policy of the German Government with regard to poultry keeping is summed up in the following statement which appears in translation in a leaflet written by Herr Salzwedel, the Managing President of the Reich's Association of Agricultural Poultry Breeders and Herd Book Breeders "The German hens, of which 85% are to be found in agricultural establishments, do not produce sufficient eggs. Therefore, in order to supply the requirements of the Reich, not an increase of the stock is aimed at, but much more a raising of efficiency in each single hen". The average annual egg production per hen has risen from 80 to 90 eggs in three years, and the aim is to raise the average to 130 eggs per hen per year. The present average consumption of eggs in Germany is approximately 200 per person annually.

At the moment Germany imports a large proportion of the eggs consumed in that country, but the aim is to develop the egg-producing capacity of the stock at home to an extent which will obviate the necessity to obtain eggs from other countries. This aim is being pursued vigorously through a well-organised system of breeding, selection, and distribution of stock birds; combined with an educational scheme under which Instructors are employed to advise on matters concerning the management, feeding and housing of the birds on the farms, particularly those of the peasant farmers.

The foundation of the breeding programme are the National Poultry Herd Book, and the Augmentation Breeders. The Herd Book is reserved for the registration of hens of particular breeds which lay the specified number of eggs and which satisfy the judges in respect of their suitability for breeding. The breeds recognised for the purposes of the Herd Book are White Leghorn, Brown Leghorn, Rhode Island Red, White Wyandotte, and White Rhinelander. Only those poultry keepers who can satisfy the Authorities regarding their integrity, the quality of their stock, the outfitting of the farms and the management of them, are accepted for membership of the Association of Agricultural Poultry and Herd Book Breeders, and no poultry keeper except a member of that Association can secure the registration of birds in the Herd Book. The Herd Book Breeders, of which there are 306, are, throughout the year, under the supervision of the officers of the Association, who keep careful records of the efficiency of all the registered breeding hens. There are 24 local offices of the Association throughout Germany and each is responsible for the supervision of the breeders in its own area. The birds to be used for breeding on the farms of those who are members of the Association are all selected by a panel of judges appointed by the Association.

To qualify for registration in the Herd Book a bird must have laid at least 175 eggs or 9,000 grams of eggs in the year, and must have been bred from a

hen with a similar record mated to a cockerel or cock whose dam had an equally good record of egg production. The cockerels from such matings are also registered in the Herd Book.

The recognised Augmentation Breeders play an important part in the production and distribution of birds from high laying strains. These Breeders must use only Herd Book cockerels which are sold at 25 Auction Sales in the course of each year usually in the autumn, and the hens to be mated with these cockerels must, if of a light breed, have laid at least 140 eggs each in the year, and if of a general purpose breed, at least 120 eggs each in the year.

In addition to the standards prescribed for egg production, all the birds accepted for the Herd Book and for use on Augmentation Breeders' farms must pass inspection for soundness and good health. Beauty and exterior shape are regarded as secondary to health, vigour and efficiency.

The birds produced on the Augmentation Farms from the matings described above are distributed to the peasant and farmer poultry keepers, who receive from the Government special grants to aid them to purchase the birds. No grants are payable in respect of birds other than those bred by Augmentation Breeders.

Very special attention is being paid to the development of poultry keeping on the holdings of peasants, and the ultimate aim of the breeding schemes outlined above is to ensure an adequate supply of stock of known quality for the increasing number of peasant poultry keepers which the policy of the Government is creating.

One large hall at the Congress was occupied by upwards of 1,400 birds, sent in by members of the Herd Book and by Augmentation Breeders. This Exhibition provided an unique opportunity of studying the practical significance of these schemes and of assessing their importance and usefulness. The great majority of the birds were of the White Leghorn breed, which is by far the most popular breed in Germany. In many cases birds of three, four and even five successive generations of the same family line were on view, with cards giving particulars of their egg production. Some excellent birds were represented in this display, and it was particularly interesting to see the remarkable vigour and stamina in some of the great-great-grand dams penned in the family groups.

Body weight, size of frame, and condition of bird generally are taken into consideration when assessing the suitability of these birds, and these points received full attention by the judges when the birds were being judged at the Congress. Deficiency in health was a definite disqualification from consideration for award.

It is obvious that the poultry authorities in Germany are fully alive to the importance of health, vigour and size in the stock birds, and of the great risk of forcing the birds for abnormal egg production and of selecting breeding stock solely on the basis of egg records. There was no evidence to suggest that egg records were being made a fetish; on the other hand it was clear that the policy being pursued is the sane one of preserving the size and vigour of the race while at the same time improving the general average of egg production. This was well illustrated at the farm of one of the Augmentation Breeders which the members of the Congress had an opportunity of inspecting. On this farm, which is situated in the neighbourhood of the Leipzig Aerodrome, a large area of cereal crops is grown, and at the time of the visit the harvesting had been completed and the crop was being carted to the stackyard. The 2,400 young pullets were ranging on the cleared stubbles and were housed mostly in old converted horse-drawn caravans. The orthodox houses were fitted also with either wheels or skids and all were being moved every ten days, as the area was cleared of corn, to give the birds fresh ground on which to range. The pullets (all White Leghorns) were remarkably tame despite the fact that aeroplanes loomed overhead and were rising from and alighting in the adjoining field. The appearance amongst the birds of some hundreds of people, talking a babel of languages, did not disturb their tranquility, and they went on as usual with their picking over the stubbles, and even posed on occasion to have group photographs taken. The outstanding impression left on the mind of the visitor to this farm was the fact that these birds were being managed in a way which was giving them the utmost opportunity of developing naturally and of building up a sound constitution and adding to their inherent vigour and vitality. They were being developed at the minimum of expense as regards feeding and housing—they got no food except what they found on the stubbles, and their sleeping accommodation was simple and primitive—but the principles underlying the maintenance of vigour and health and the development of sound constitution were being observed.

The same principles were being adopted at one of the oldest and largest poultry breeding farms in Germany. At this farm, which is situated at Garath near Dusseldorf, the young pullets are ranged on fresh pasture of excellent quality, and housed in small type houses on a separate farm from that on which they are hatched, and to which the best of them will ultimately return for breeding stock. The laying houses at the Garath home farm are exceptionally large, and stationary, but care is taken to ensure that the pullets before being put into them have had the full benefits which fresh range with movable houses confer during development. These large laying houses, some of which were built over 25 years ago, show that the owner was even then a progressive poultry keeper, as their style and arrangement compare favourably with the modern poultry house. A very large day-old chick trade is done

on this farm, and 83,481 chicks were sold in 1936. The owner claims that disease is unknown on the farm.

A convenient method of dealing with poultry parasites which hide in the nest boxes and other movable fittings of the house was seen at Garath. It consisted of a chamber made of sheet iron into which the fittings are placed, and a fumigant sold under the name of "Ariginal" released in the chamber, after which the door is closed and left closed for at least 12 hours.

Educational Activities.—A scheme of instruction on lines somewhat similar to those operating in this country has been adopted in Germany. There are 117 poultry instructors, of whom 34 are men and 83 are women. The women instructors when on duty are all attired alike in a light blue uniform dress and a head covering made of a square of red material tied on the head. There is a band on the left arm on which the German equivalent of the word "Instructor" is woven.

Each Instructor is allotted a definite area, and the duties are confined largely to personal visits to the homes of the peasants and small farmers. The Instructors are appointed by the Reich's Board of Food Supplies. This scheme has been in operation only for a few years, and is part of the general policy of the Government to encourage the production in Germany of all the eggs and poultry required by the German people. The Instructors assist the peasants in regard to obtaining birds from the Augmentation Breeders and give advice on the holdings in respect of hatching and rearing, feeding, housing and culling.

In connection with the feeding of poultry very radical changes are being made. These were well illustrated in a special exhibit in the German section of the Educational Exhibits in the Exhibition Hall at the Congress.

The Exhibit consisted of illustrated "cut outs" on a panel which showed the three stages in the change as follows:—

(1) No protein, very few eggs.

(2) Protein imported and eggs produced but money leaving the country.

(3) Present system of feeding milk, potatoes, and grain—all home-produced foods.

The use of milk and of home-produced cereals is now prominently encouraged throughout Germany on the average farm. Usually the milk is given in a sour state and no other protein supplement is advocated. Formerly, milk was not fed to poultry, and as calf rearing is not a general practice there was a limited outlet for skim milk. Imported fish meal and other protein foods of similar nature were largely used as the supply of such foods available in Germany is limited. This meant that a home-produced food was not being utilised while money was being sent out of the country for a substitute. Now

the home article is being used with excellent results, and the importation of protein foods for poultry is unnecessary.

Another very important and necessary function of the Instructors is to advise on housing. Generally, the housing of poultry in Germany is still unsatisfactory and much below the standard of housing in this country. Good ventilation is not always fully appreciated, nor is proper lighting, but the Instructors are giving special attention to these matters, and improvement can already be seen. It would be wrong, however, to give the impression that all the poultry houses are inferior to those in this country. On some of the commercial farms visited, such as that at Garath, excellent houses were seen. Generally, however, even these houses are not so well ventilated as seems to be desirable and necessary in this country. They are, in most cases, very substantially built with timbers which are considerably heavier than is customary to use here. This is necessary in a country where heavy frost and snow occur during the winter.

Laying Tests.—There are ten centres at which laying tests are conducted, and two distinct types of test. In the "A" type seven pullets comprise a pen and the pullets are selected by the breeders. The records of the best 5 only of each pen are considered. There are five of this type of test.

In the "B" type, of which there are also five, the pullets are selected by representatives of the local branches of the Association of Peasant Poultry Keepers. In all except two of the "B" tests the average production is based on the entire flock, and in the two exceptions the records of the five best out of seven birds are taken. The test period in all cases except one, where it was 334 days, was 350 days.

Two of the five "A" tests were visited, namely that at the District Poultry Breeding Institution of Upper Bavaria at Erding near Munich, and that at Krefeld-Grosshüttenhof. The test at Erding comprises 30 pens, and the plant generally is ideal for the purpose. Some very good pens of birds were seen in this test: one pen of White Leghorns in particular was much fancied, the birds being typical and of good size, and the average production for the ten months the test had been in progress was 202 eggs per bird.

The standard feeding of the birds in the laying tests is as follows:—

October to March—	April to September—
20% barley meal.	20% barley meal.
15% maize meal.	20% maize meal.
20% dried potato flakes.	20% dried potato flakes.
15% crushed oats.	15% crushed oats.
30% protein supplement.	25% protein supplement.

2 oz. grain (barley and maize) per head daily.

Skim milk, buttermilk, or thickened sour milk always available.

The protein supplement consists of :—

25 parts fish meal.
25 ,, meat meal.
10 ,, blood meal.
33 ,, extracted soya bean meal.
7 ,, ground mussel shell meal.

This mixed protein supplement is also available for use by private poultry keepers at a standard price which is fixed by the Government.

It was a surprise to find a mash having such a high proportion of protein being used in conjunction with milk, but the appearance of the birds at Erding did not suggest that they were being forced unduly. The birds were in good condition and the average mortality in the test to the end of the tenth month was only 8 per cent.

In the published report* on the results of the German laying tests from 16th October, 1934, to 30th September, 1935, the average egg production of the 5 best birds in each entry over all five "A" tests was 214.9 eggs and the average mortality 11.5 per cent. The corresponding figures for the Erding test alone were 225.6 and 17.1 per cent. The average egg production in the case of the five "B" tests was 200.6 eggs and the average mortality 13.2 per cent.

The Rhenanian egg laying test is at Krefeld-Grosshüttenhof and is run in conjunction with the German Training and Experimental Institution for the breeding of small animals. In this test there are 70 pens each of 7 pullets. There are also at this centre an egg laying test for ducks, and a progeny testing station at which the breeding qualities of individual hens are tested through two years of laying of their daughters. In the duck laying test there are six pens of five ducks each. At this Institution, which is also a training centre for pupils, the principal breed kept is the White Leghorn. Until last year the practice had been to retain the cockerels and sell them dressed for table but this practice is no longer profitable and the cockerels are now sold for the equivalent of about 2d. each when 6 weeks old.

The following table gives particulars of the numbers of the different breeds of pullets represented at the five A type laying tests in Germany in 1934/35; also the average egg production and the percentage mortality in respect of each breed.

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*Dr. Kurt Taut: Archiv fur Geflügelkunde. Vol. 10, Part 7. July 1936, page 242.

Breed.	Number of Pullets.	Average egg production.	Percentage Mortality.
White Leghorn ..	1,029	219.5	11
Rhode Island Red ..	84	208.8	17
Brown Leghorn ..	126	214.9	11
White Wyandotte ..	35	226.9	—
White German ..	21	168.1	19
Plymouth Rock ..	49	188.1	Not published.
Orpington ..	14	183.3	,,

Research Work.—A most interesting piece of research work concerning the incidence of curvature in breast bones is in progress at Erding. For this test the birds were bred from crooked-breasted dams mated with crooked-breasted cockerels and the object of the investigation is to study the influence of darkness, perching and intensive housing, respectively, on the incidence of breast bone curvature.

Tests to assess the value of pasture for poultry have been in progress at Erding since 1929. In the first of these tests it was found that when birds had access to open pasture there was a saving of 40.8% in protein food and of 34.3% in the total cost of feeding.

General.—Viewing the methods which are being adopted to ensure that Germany shall produce all the eggs she requires it is clear that the idea behind the organisation is to encourage the peasant farmers to keep poultry of good quality and to manage and feed the birds properly. Specialist poultry farms, where poultry keeping is the sole or chief source of income, are not encouraged. The keeping of poultry as a side line is encouraged and the peasant poultry keeper is already finding it profitable to devote part of his time to the poultry flock. By producing all the food required for the poultry on his own holding he is able to feed his hens at a low cost and thus to obtain a fair profit from the sale of the eggs.

A good average egg production from all the hens in Germany and not spectacular records from a small proportion is the objective of those in charge of the poultry industry development. To this end good health, size and vigour in the breeding stock are regarded as of more importance than extremely high egg records, and essential for the improvement in average production which is the objective. Breeding for extremes, both as regards exhibition points and egg production is definitely discouraged and the policy is the building up of strong, healthy stock which will be able to attain and maintain a good general average production, and at the same time be able to resist the germs of disease so that wastage will be small and eggs to meet the requirements of the country and make it independent of imports be produced at as low a cost as possible.

Quality of Stock.—The quality of the poultry seen generally on farms in Germany was of reasonably good standard. At the Institutions visited the stock, on the whole, would compare favourably with the general standard of quality of birds in this country. The White Leghorns are of the American type and while in some strains loss of body size was evident, in other cases the birds possessed excellent size and were otherwise above the average standard of White Leghorns in this country. White Leghorns which were superior in size and quality to those elsewhere were seen at Erding where also there were Brown Leghorns of good size, type and quality.

AGRICULTURAL STATISTICS AND THE FARMER.

AN IMPORTANT DECISION.

A ruling of considerable interest to the Ministry of Agriculture and the farming community was made by Lord Justice Andrews during the hearing of a bankruptcy matter in the High Court on the 11th September, 1936.

A demand had been made to the Ministry to produce for purposes of the bankruptcy proceedings a document containing particulars of tillage returns which had been collected by the Ministry.

It was contended on behalf of the Ministry that the Minister of Agriculture was satisfied that the disclosure of this information would be contrary to the public interest. It was pointed out that the information had been obtained on a voluntary and confidential basis, that it would be used merely for general abstract purposes, and that no publicity whatsoever given as to detailed information appertaining to individual farms. Reference was also made to the fact that the Ministry had no statutory authority for compelling the disclosure of the information.

Lord Justice Andrews stated that in the circumstances as disclosed in Court by the Ministry's representatives, he did not think it proper that documents of the nature in question should be disclosed and ruled accordingly.

In this connection, it may be added, that the Ministry has consistently regarded detailed information obtained from these returns of the acreage under crops and numbers of live stock, which are collected and furnished direct to the Ministry by members of the Royal Ulster Constabulary, as strictly confidential. Farmers generally have been fully satisfied in this respect, and have co-operated in the fullest possible manner in the collection of statistical information. The data so collected frequently forms the basis of decisions on questions of government policy and has proved of considerable advantage in the administration of the Agricultural Marketing Schemes.

MARKETING SCHEMES.

AGRICULTURAL MARKETING (PIG INDUSTRY) ACT (N.I.), 1934 :—

PIG PRICES FOR SEPTEMBER, 1936.

The Pig Industry Council for Northern Ireland have announced the following prices for dead pigs sold by producers to curers in Northern Ireland in September, 1936. These prices are slightly above those of last month.

Weight Class. (Dead Weight)	Grade A.	Grade B	Grade C.	U.L. or U.F.
I c.1.1.14 to c.1.2.14	59/7	56/7	53/7	50/7
II c.1.2.15 to c.1.3.14	59/7	56/7	53/7	50/7
III c.1.3.15 to c.2.0.0	56/7	53/7	50/7	47/7
IV c.2.0.1 to c.2.0.14	50/7	47/7	44/7	41/7

U.L.—Under Grade A measurements. U.F.—Over Grade C measurements.

The price for partly black pigs between c.1.1.14 and c.2.0.14 is 5/- per cwt. below the relevant grade price.

Authorised cuts :—

(a) Broken ham (dry, shank and/or shell bone break)—5% of the gross value of the carcase.

(b) Broken ham (wet break)—12½% of the gross value of the carcase.

(c) Shoulder-stuck carcase—3/- per shoulder affected.

The gross value of a carcase is the product of the dead weight and the relevant grade or other price per cwt.

Where portion of a pig carcase weighing between c.1.1.14 and c.2.0.14 is condemned and the existence of disease could not reasonably have been known to the producer at the time of slaughter the appropriate grade price shall apply. If the carcase is wholly condemned on account of disease, the existence of which could not reasonably have been known to the producer at the time of slaughter, the relevant Grade B price shall apply.

The foregoing prices do not apply in the case of (a) wholly black pigs, boars, rigs or stags, sucked sows, and pig carcases weighing under c.1.1.14 or over c.2.0.14, and (b) pigs visibly diagnosable as diseased before slaughter and subsequently condemned; emaciated or screw pigs; smelling pig carcases with definite indications of putrefaction and pig carcases badly abused or damaged before being handed over by the producer to the curer.

Prices for Wiltshire Pigs Sold on Direct Contract.

In the case of pigs sold alive under direct contract to Wiltshire curers the prices per dead cwt. payable for graded pigs delivered in respect of the month of September, are as follows: —

Weight Class (Dead Weight)	Grade I.	Grade 2.	Grade 3.
Under c.1.0.14	53/7	53/7	53/7
c.1.0.14 to c.1.2.7	65/7	61/7	57/7
c.1.2.8 to c.1.2.10	62/7	58/7	54/7
c.1.2.11 to c.1.2.14	60/7	56/7	52/7
Over c.1.2.14	57/7	53/7	49/7

(The standard price, exclusive of bonus, for bacon pigs sold by contract in Great Britain during September is 11/11 per score dead weight, equivalent to 66/9 per cwt.).

Prices for Live Pigs Sold to the Pigs Marketing Board.

The following prices per live cwt. will be paid for live pigs by the Pigs Marketing Board on and from September 1, 1936, until further notice:—

Weight Class (Live Weight)	Grade 1	Grade II.	Grade III.	Unsuitable.
c.1.2.0 to c.1.3.14	49/6	47/–	44/6	38/–
c.1.3.15 to c.2.0.0	45/6	43/–	—	38/–
c.2.0.1 to c.2.1.14	43/–	40/6	—	38/–
c.2.1.15 to c.2.2.7	40/6	38/–	—	35/–
c.2.2.8 to c.2.2.21	37/–	34/6	—	31/–

These prices do not apply to live pigs outside the above weights, live pigs intended for breeding, live boars, live sucked sows, rigs or stags, injured or diseased pigs, live in-pig gilts, or live pigs sold (on contract registered with the Pig Industry Council) to curers in Northern Ireland. All other live pigs inside these weights can be sold only to the Board.

Authorised Deductions.

Every pig (dead or alive) sold to a curer or to the Pigs Marketing Board is subject to a contribution at present amounting to 1/-.

In addition to this amount, a deduction not exceeding 6d. per pig may be made in the case of sales to curers to cover insurance, so that the producer will not suffer financial loss if the carcase is condemned as unfit for human consumption.

In the case of pigs sold to the Board, there is a deduction of 2/6 per pig for marketing charges.

COST OF STANDARD PIG RATION.

The average retail cash price per cwt. of the standard ration, as calculated by the Ministry for the sixteen weeks period ended 22nd August, was 7/4¼d. This price was used together with the realised prices of bacon and hams and of fresh meats over a set period, to determine the standard price of pigs for September.

The ration upon which the feeding cost is based is as follows:—

Barley Meal	30%
Maize Meal	40%
Pollards (White)	20%
Extracted Soya Bean Meal	5%
Meat and Bone Meal (60% Protein) ...	5%

GRADING STATISTICS.

Table showing the percentages of pig carcases falling within the weight and grade classes indicated during July, 1936.

Grade A.				Grade B.				Grade C.				Total
1	2	3	4	1	2	3	4	1	2	3	4	
19.13	13.43	1.66	.25	14.37	17.06	2.54	.64	5.90	8.89	.99	.24	85.10

UNGRADED CARCASES.

Under Grade A measurements. U.L.	Over Grade C measurements. U.F.	Wholly condemned. U1.	Wholly black, injured or damaged. U2.	Overweights, Underweights, boars, sows, etc. X.	Partly Black. Y.	
.01	4.39	.06	.80	9.59	.05	14.90
					Total	100%

The above figures have been calculated from the purchase and grading statements which the curers furnish to the Ministry.

The volume of trade in July suffered a large reduction, and the total number of carcases was the smallest since February. This was due to the holiday period, returns for which show a considerable drop in purchases. The average price per carcase was £4 10s. 6d., an advance of 11d. on the June figure. The average weight showed an increase of 1 lb. at c.1.2.13, while the average price per cwt. was 1d. dearer at £2 15s. 10d. (In calculating the average weight of the carcases allowance has been made for those carcases purchased by the curers from the Pigs Marketing Board).

The following table gives the result of an analysis of the purchase and grading statements furnished by Wiltshire bacon curers in respect of live pigs delivered on direct contract by producers during the month of July, 1936.

Weight Class.	Grade 1.	Grade 2.	Grade 3.	Unsuitable.	Total.
Under c.1.0.14	.13	.94	.03	—	1.10
c.1.0.14 to c.1.2.7	34.74	44.17	16.27	.05	95.23
c.1.2.8 to c.1.2.10	.22	.78	.54	—	1.54
c.1.2.11 to c.1.2.14	.08	.62	.48	—	1.18
Over c.1.2.14	.03	.46	.46	—	.95
Total	35.20	46.97	17.78	.05	100

The average price per cwt. in respect of these deliveries works out at 61/8d. after making allowance for levy deductions.

The average weight works out at c.1.1.15., the net average price per pig being £4 5s. 7d.

THE MARKETING OF EGGS ACT (NORTHERN IRELAND), 1936.

EGGS MARKETING COMMITTEE.

The election of members to represent licensed wholesale dealers of classes A and B on the committee was conducted by post, and resulted as follows:—

CLASS A.

Electoral Division I. (3 members)—

x 1. James Pepper, c/o. Messrs. J. Harvey & Company, Kenlis Street, Banbridge, County Down 324

x 2. Robert Bell, 2 Wellington Place, Belfast 296

x 3. William MacAdam, c/o. Scottish Co-operative Wholesale Agricultural Society, Enniskillen, County Fermanagh ... 276

4. G. D. Sweeny, c/o. Messrs. Honeyford & Company, Main Street, Strabane 76

Electoral Division II. (1 member)—

x 1. H. Roberts, c/o. Messrs. Thomas Robinson, Sons & Company, Limited, Canal Basin, Strabane 53

2. R. A. McElderry, The Markets, Ballymoney 42

Electoral Division III. (1 member)—

x 1. A. E. Gale, c/o. Messrs. A. E. & R. Gale, Brookeborough, Co. Fermanagh 97

2. Robert Coulter, Browndodd, Doagh, County Antrim ... 26

CLASS B.

(2 members).

x 1. William Allen, New Villas, Union Street, Lurgan, Co. Armagh 326

x 2. David McComb, 231a, Castlereagh Road, Belfast ... 244

3. William John Brown, Tamlaghtmore, Stewartstown, Co. Tyrone 228

4. Michael McGurk, R.D.C., County Councillor, Killeenan, Kildress, Cookstown, Co. Tyrone 181

5. Peter O'Rourke, Stewartstown, Co. Tyrone 138

6. William F. Dunlop, Ballybundon, Killinchy, Co. Down ... 119

Samuel Robert Elliott, Main Street, Irvinestown, Co. Fermanagh 119

7. James McParland, Meredith Place, Armagh 109

8. Samuel James McDowell, 1 Larne Street, Ballymena ... 105

A. Morrison, Magherafelt, Co. Londonderry 105

9. Rita Burns, Drumaness, Ballynahinch, Co. Down ... 85

10. Thomas Patterson, Drumaness, Ballynahinch, Co. Down ... 42

Candidates marked x were declared elected.

THE CATTLE INDUSTRY (EMERGENCY PROVISIONS) ACTS, 1934 AND 1935.

The following table, supplied by the Cattle Committee, shows the average prices per live cwt. of all cattle in respect of which payments have been made from the Cattle Fund:—

	England & Wales.			Scotland.			Northern Ireland.			United Kingdom.		
	1936	1935	1934	1936	1935	1934	1936	1935	1934	1936	1935	1934
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	d. s.	s. d.	s. d.	s. d.	s. d.
January ..	35 2	35 2	—	38 0	39 0	—	30 9	31 3	—	35 5	35 10	—
February ..	35 2	33 10	—	37 5	37 2	—	31 11	30 10	—	35 5	34 4	—
March ..	35 2	33 5	—	36 4	36 1	—	32 4	29 10	—	35 2	33 9	—
April ..	35 11	33 11	—	37 0	36 0	—	31 11	29 8	—	35 11	34 2	—
May ..	36 11	35 5	—	37 6	37 5	—	33 1	30 11	—	36 10	35 7	—
June ..	39 1	36 7	—	40 3	38 11	—	35 4	32 4	—	39 2	36 10	—
July ..	38 4	35 10	—	40 3	40 2	—	34 1	31 11	—	38 6	36 6	—
August ..	37 4	33 11	—	40 1	37 7	—	34 7	31 0	—	37 9	34 6	—
September ..	—	33 4	37 0	—	36 4	40 10	—	29 4	33 7	—	33 8	37 9
October ..	—	32 8	34 10	—	35 7	38 11	—	28 2	31 3	—	32 11	35 7
November ..	—	32 5	33 9	—	36 6	38 8	—	27 7	30 1	—	32 9	34 7
December ..	—	35 0	35 5	—	38 2	39 7	—	28 10	30 10	—	35 3	36 0

The average live weights of the cattle in respect of which payments have been made by the Committee have been as follows:—

	England & Wales.			Scotland.			Northern Ireland.		
	1936	1935	1934	1936	1935	1934	1936	1935	1934
	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.	Cwt. qr. lb.
January ..	9 2 21	9 2 24	—	9 3 14	9 3 8	—	8 2 4	8 2 20	—
February ..	9 2 15	9 2 18	—	9 3 9	9 3 8	—	8 1 14	8 2 13	—
March ..	9 2 7	9 2 15	—	9 3 13	9 3 8	—	8 0 26	8 1 23	—
April ..	9 1 20	9 2 8	—	9 3 12	9 3 17	—	8 0 19	8 1 20	—
May ..	9 1 4	9 2 0	—	9 3 3	9 3 11	—	8 0 5	8 1 2	—
June ..	9 0 17	9 1 7	—	9 3 6	9 3 24	—	8 0 1	8 0 26	—
July ..	9 0 22	9 1 7	—	9 2 7	9 3 9	—	8 0 9	8 1 4	—
August ..	9 0 27	9 1 16	—	9 1 20	9 3 9	—	8 0 25	8 1 6	—
September ..	—	9 1 18	9 2 3	—	9 3 9	9 2 24	—	8 1 16	8 2 15
October ..	—	9 1 13	9 1 20	—	9 3 5	9 2 23	—	8 1 20	8 2 9
November ..	—	9 1 17	9 1 21	—	9 3 8	9 3 1	—	8 1 20	8 2 13
December ..	—	9 2 26	9 3 3	—	9 3 11	9 3 3	—	8 1 22	8 2 13

NOTE.—The average weights given in this table are calculated from the nett weights on which payments have been made. The average weights of the cattle as weighed at the Centres would be 28 lb. heavier in each case.

The total amount paid to Northern Ireland owners in respect of subsidy up to and including 29th August, 1936, was £505,248 2s. 6d., and was in respect of 241,796 animals. The average amount received per head of cattle to that date was, therefore, £2 1s. 9½d. The return for the week ended 29th August shows that the payments were made to Northern Ireland owners for 2,661 head of cattle, including 1,953 steers, 639 heifers, and 69 cow-heifers. The total realized prices of these animals was £36,938 6s., the average price per head £13 18s., and per cwt. live weight 33s. 11d. The total weight of the cattle amounted to 21,792 cwt., and the average weight of each beast 8 cwts. 0 qrs. 21 lbs. The average amount of subsidy received per head of cattle was, therefore, £2 0s. 11¼d.

WHEAT ACT, 1932.

THE WHEAT COMMISSION PAY 4s. 2d. PER CWT. TO WHEAT GROWERS FOR 1935-36.

The Wheat Commission are now preparing the final payments due to wheat growers under the Wheat Act, for the fourth cereal year, which ended on the 31st July. Growers who delivered valid wheat certificates to the Commission by 26th June, 1936, have already received an advance payment at the rate of 2s. 9d. per cwt. The final payment will be a payment of the balance in the case of these growers, but the full amount for the year will be paid in the case of those growers who have not been paid an advance on account.

As a preliminary step, the Minister of Agriculture and Fisheries has made an Order, on the advice of the Wheat Commission, prescribing two figures on which the calculation of the payments to growers has to be based. By this Order the Minister has prescribed 5s. 9.231d. per cwt. as the "ascertained average price" of home-grown millable wheat, at farm, obtained by registered growers in 1935-36. The Order also certifies that the quantity of home-grown millable wheat sold by registered growers in 1935-36 was 33,650,000 cwts.

The Wheat Act specifies 10s. per cwt. as the "standard price". A registered grower is entitled to receive from the Wheat Commission a "deficiency payment" for each cwt. of wheat sold by him, representing, subject to two provisos, the difference between the "ascertained average price" and the "standard price". The two provisos are, firstly, that a deduction has to be made from the deficiency payments to defray the costs of administration, and, secondly, that if the quantity of wheat certified by the Minister to have been sold by registered growers in the cereal year exceeds the quantity taken to be the anticipated supply for the year, the quantity of the wheat sold for which deficiency payments are to be paid shall be reduced proportionately for each grower.

The difference between the ascertained average price (5s. 9.231d. per cwt.) and the standard price of 10s. is 4s. 2.769d. per cwt. From the latter figure, the Wheat Commission have decided to deduct 0.593d. per cwt. to cover administrative expenses for 1935-36. Therefore, the deficiency payment for 1935-36 will be 4s. 2.176d. per cwt.

It is here that the second statutory proviso referred to comes into operation. The quantity certified as sold is 33,650,000 cwts. This quantity is in excess of the maximum of 27,000,000 cwts. for which, in accordance with the Wheat Act, deficiency payments may be paid in any cereal year. 27,000,000 cwts. is 80.238 per cent. of 33,650,000 cwts.; therefore, under the Act, each grower is to receive deficiency payments in respect of 80.238 per cent. of the quantity of certified sales credited to his account. This is the same thing as saying that each grower is to receive 80.238 per cent. of the deficiency payment, that is 3s. 4.26d. per cwt. in respect of all of the certified sales credited to him.

It is to be noted that the average amount received by registered growers as a whole, by way of market price plus deficiency payment, in respect of all certified millable wheat, will be 9s. 1.491d. per cwt. for the cereal year 1935-36. The deduction for administrative expenses for 1935-36 is equivalent to about 0.476d. per cwt. reckoned on the total quantity certified as sold.

The comparative figures for the last three cereal years are:—

	1935-36.	1934-35.	1933-34.
	s. d.	s. d.	s. d.
1. Ascertained average price per cwt. ..	5 9.231	4 10.873	4 7.63
	cwts.	cwts.	cwts.
2. Millable wheat certified as sold ..	33,650,000	35,920,000	29,570,000
	s. d.	s. d.	s. d.
3. Administrative expenses per cwt. certified as sold ..	0.476	0.39	0.475
4. Wheat Commission's payments to growers per cwt. certified as sold ..	3 4.26	3 9.55	4 10.3
5. Average amount per cwt. (market price plus deficiency payment) received by growers for all wheat certified ..	9 1.491	8 8.423	9 5.93

The Wheat Commission expect to be able to send out the cheques for final payments about the 12th September. It will be understood that those registered growers who have already received an advance on account for any wheat at the rate of 2s. 9d. per cwt., will be paid only the balance of 7.26d. per cwt. in respect of that wheat.

AGRICULTURAL NOTES.

SEASONAL FARM NOTES.

THE LAND.

Grain Crops.—Unfavourable weather conditions have made the saving of oats, wheat and barley extremely difficult this season. During broken weather the building of well constructed huts of oats in the fields is strongly recommended. A field of oats can be hutted very rapidly and when the huts are well made the grain is protected and the butts of the sheaves will dry out better than when the sheaves are left in stooks. Moreover, carting from huts may be done during weather that would preclude doing so from stooks.

Stacking or storing in sheds should be carried out as soon as the crop is in a fit condition to permit of this being done. It is a wise plan to build stacks of grain crops on elevated stands about 2 ft. 6 in. high to prevent rats and mice from gaining access to them. The stacks should be thatched as soon as possible after being built, otherwise waste may occur should wet weather supervene.

Hay.—Crops of hay still remaining in field "ricks" should be carted and stacked at the earliest opportunity. Undue loss occurs when the "ricks" remain for prolonged periods in the fields and, besides, cattle cannot be turned on to the aftermath in time to make full use of it before the grazing season ends. Every effort should, therefore, be made to clear hay fields and to turn stock on them as soon as possible.

Potatoes.—The lifting and storing of early and second-early varieties of potatoes should be carried out when opportunity offers. Delay in lifting after the crop is ripe results in a greater proportion of the tubers becoming diseased and unfit for use. The chats and diseased tubers should be separated from the saleable potatoes at lifting time and stored separately. If storing in pits is practised, the potatoes should be well thatched with a layer of straw before earthing up is done so as to ensure that they will be in a clean, dry condition when lifted. Rushes should not be used for thatching potato pits as this practice may result in the seeds of the rushes being spread and ultimately to the appearance of these weeds in the field.

In some districts it is still customary to utilise potato stalks to cover the potatoes in pits temporarily. This practice is condemned as it is frequently

the cause of the spread of disease throughout the pit and of many of the tubers rotting during storage. A light covering of dry straw is all that is required to protect the potatoes from damage until earthing up of the pit is done.

The seed for next season's crop may be selected and placed direct into sprouting boxes at lifting time. The boxing of seed potatoes is strongly recommended as it promotes heavier yields and the production of cleaner crops.

Mangels.—Crops of mangels should be lifted and stored before night frosts appear; very little frost is sufficient to cause damage to these roots and to impair their keeping qualities. The clamp should be made convenient to the farmyard and covered with a thick layer of rushes, ditch cuttings or old grass.

Lea Ground.—Grass fields intended for breaking up this winter should be kept heavily stocked from now onwards. Close grazing previous to ploughing aids in preventing attacks of insect pests such as wireworms and leather-jacket grubs in the succeeding crop.

Catch Crops.—Readers are reminded of the advantages of growing a small area of cabbages in ground from which early potatoes have been dug to provide succulent food for stock next spring. As weather conditions this season were unfavourable for obtaining good quality hay, a supply of succulent food will be extremely valuable for stockfeeding purposes next spring before the grazing season commences. Italian ryegrass can also be grown for this purpose and will produce a heavy yield of succulent food on land in good condition. It should be sown at the rate of from 3 to 4 bushels per acre and harrowed in lightly. If not already done, cabbages should be planted or Italian ryegrass sown without delay.

Pastures.—Fields on which the grass has seeded, or on which there are coarse tufts of uneaten grass, will benefit considerably from top mowing when time permits. In addition, a run of the chain harrow to spread the droppings of manure is well worth while, as it prevents the growth of unpalatable coarse tufts in the pasture next season.

SEASONAL LIVESTOCK NOTES.

Sheep.—Selection of Breeding Flock:—The selection of the breeding flock of sheep calls for special attention at this time. In last month's Report the importance of using a good ram was stressed. Any extra money spent on the purchase of a superior ram will be well repaid by the better quality of the lambs produced. Readers are reminded that a premium system for rams is

in operation in all counties, and farmers in the vicinity of premium holders should take advantage of the opportunity of having some of their ewes mated with these superior animals at a nominal fee. Further particulars of this scheme can be obtained from the Secretary of the Committee of Agriculture for the County.

The ewes should be carefully examined and only those which are sound and healthy and have good mouths and udders retained for breeding purposes. Farmers wishing to introduce fresh blood to their flocks should note that breeding sheep will be admitted into Northern Ireland from certain sheep sales in Scotland during September and October. Particulars regarding the sales from which sheep will be admitted and the conditions relating to importation are given on page 37 of this Report.

Recognition of Service Dates:—Before turning the ram with the ewes, the wool around the tails of the latter should be clipped, and the breast of the ram smeared with keel, or other colouring matter, so that the date of service may be known. The colouring matter should be mixed with lard or grease: on no account should it be mixed with oil, as besides damaging the fleece, it will harden and become usless. When mixed with lard or grease, however, the keel remains soft and one application lasts a considerable time. By changing the colour of the keel every third week, ewes returning to service can be recognised and the period during which lambing will take place can be noted.

Flushing of Ewes:—Best lambing results are usually obtained from ewes which are in a forward condition at mating time so that, if possible, a change from moderately poor conditions to those which encourage a state of thriving should be given. A field of aftermath is excellent for turning the ewes and ram on to during the mating season and, if available, should be used for that purpose. Useful hints on the care and management of sheep are given in Leaflets Nos. 47 and 63.

Liver Fluke Disease:—Preventive measures should be taken early to guard against possible losses from liver fluke disease, especially where sheep are grazing on low-lying or wet pastures. Full particulars of the measures recommended for controlling this disease are given in Leaflet No. 24.

Cattle:—Prevention of "Husk" or "Hoose":—In districts where this ailment is liable to occur calves should be housed at night, from this time onwards, and not allowed out in the mornings until the dew is dried off the grass. A small allowance of a mixture of equal parts crushed oats, maize meal and decorticated earthnut cake, should also be given. Housing at night and maintaining the animals in good condition are the best methods of preventing attacks. Useful information on the control of this malady is given in Leaflet No. 80.

Autumn Born Calves:—Calves born during the autumn are best kept indoors and not allowed out until next spring. Well-ventilated, well-lighted houses which are easily kept clean are essential if the calves are to thrive properly throughout the winter. Full particulars regarding the feeding and management of calves are given in Leaflet No. 54.

Fattening of Cattle:—Cattle intended for fattening during the coming winter should receive an allowance of concentrates on the grass from now onwards. The feeding of meals now will aid in preventing the cattle from getting a "setback" which sometimes occurs when they are changed from pasture to winter feeding in houses. A meal mixture, such as 2 parts by weight crushed oats, 1 part by weight maize meal and 1 part by weight decorticated earthnut cake, is suitable for this purpose and should be fed at the rate of about 3 lb. per head daily.

Feeding of Milk Cows:—Cows should receive an allowance of concentrates now to maintain milk yields, as grass at this time of year has lost much of its feeding value. Examples of suitable meal mixtures to use for this purpose are given in Leaflet No. 16. Where supplies of cabbage are available they provide a useful aid in maintaining milk yields when the grass becomes scarce.

Pigs.—Cheapening of Rations:—As the cost of feeding stuffs has increased lately, potatoes, which are selling at low rates, can with advantage be included in rations for pigs. Potatoes, which should be cooked for pig feeding purposes, are rich in carbohydrate or starchy material but have a very low protein content. For this reason it is necessary when potatoes are being fed to increase the quantity of milk, or of milk substitute, such as soya bean meal or meat and bone meal, in the ration. Particulars of suitable meal mixtures to feed along with potatoes are given in Leaflet No. 35. It should be noted that excessive quantities of potatoes should not be fed to fattening pigs as, if fed to excess, potatoes tend to produce pot-bellied pigs and may also have a deleterious effect on the quality of the carcase. Not more than 12 lb. of cooked potatoes per pig daily should be fed at any stage of fattening.

SEASONAL GARDEN AND ORCHARD NOTES.

Cabbage Planting.—Preparations should now be made for planting out cabbage plants raised from seed sown in July. The plants should be placed in their permanent quarters before the end of September and the ground should not be too rich as the plants will not stand the winter well, if grown rank. Ground, from which a crop of early potatoes has been dug and which is moderately firm, is generally quite suitable for this crop without the addition of further manure during the autumn.

Cauliflowers.—Cauliflower plants for overwintering and produced from seed sown during August should be pricked out in shallow frames in a firm bed before severe frosts occur. When the plants are established the frames should be ventilated on all suitable occasions during the winter.

Celery.—Main crop celery should now be ready for earthing up. Too much soil should not be placed around the plants at any one time. This work should be done on three or four occasions when the plants are dry, allowing from 14 to 21 days between each two mouldings, and taking care that none of the soil is allowed to get between the leaves. The plants should be protected against attacks of celery leaf blight by spraying them about every fourteen days with Burgundy mixture made by dissolving 1 lb. Bluestone and $1\frac{1}{4}$ lb. washing soda in 10 gallons of water. The spraying must be thoroughly done; the young leaves especially must be well coated with the spray.

Lifting and Storing of Onions:—Onions from seed sown in the spring should soon be ready for lifting. The bulbs should be dried in an open shed or other well-ventilated structure where they will not get wet by rain or dew. When thoroughly dried they should be stored in a cool, airy place, such as a loft, or they may be made into hanks and hung from the roof of an open shed.

Winter Lettuce.—Where glasshouses are available they should be used for growing lettuce in winter, which, when successful, is a very profitable crop. If seeds of a suitable variety, such as "Cheshunt Early Giant", are sown early in October in shallow boxes, containing soil which has been partially sterilised, and the plants well grown, good-hearted lettuce should be ready for cutting shortly after Christmas. Considerable care in the cultivation of winter-grown lettuce is necessary, but during the spring good prices are generally realised for well-grown produce.

Storing of Apples.—Preparation should be made for harvesting the late apple crop. The store houses should be cleaned out and all dust and debris removed. One of the most common causes of poor prices being obtained in this country for apples which have been kept in storage during the winter is the poor and often dirty condition of the fruit when removed from the store in the spring. Each year the interior of the store should be brushed down and cleaned some days before any fruit is placed in it. The walls, after being brushed down, should be given a coat of whitewash, and all woodwork should be scrubbed with a strong solution of washing soda. The storage cases should also be cleaned and where necessary repaired. If an engine-driven sprayer is available, the store and cases can be very readily cleaned by spraying the walls, ceilings, woodwork, etc., with water with as much force as the machine is capable of developing. A final washing down should be given with a solution made by dissolving 2 lb. bluestone in 10 gallons of water. This solution will

help to keep the woodwork and storage cases from rotting, and at the same time reduce the risk of moulds or disease spreading on the fruit while it is in the store. Growers, who intend ordering more storage cases, should place their orders immediately so that the makers will have them ready before the pulling of the main crop commences. The present reports of the apple crop and of the markets indicate that this year there will be little demand for home-grown apples until late in the season, and the grower who stores sound, clean fruit in a good house which has been previously well cleaned, may benefit later.

Picking of Apples.—On many farms the apples are picked and handled much too roughly for successful storage. Apples are more easily damaged than eggs by rough handling, but, unlike eggs, they may not show the damage for some days; thus, apples, which are injured and unfit for storage as a result of rough handling, may escape notice at the time of storing and be placed in the store. All receptacles in which apples are picked from the trees should either be made of soft material, or, if baskets or buckets are used, be lined with a piece of sacking or other material to prevent bruising of the fruit. Many of the keenest competitors for the British market compel their pickers to use gloves when pulling apples so as to prevent damage by finger nails, bruising, etc. Too often the grower or his helpers in Northern Ireland damage the fruit irreparably with their finger nails during pulling. Much of the damage that is caused at the time of picking can be avoided if reasonable care is taken by the pickers.

Bees.—Owing to the wet weather that prevailed during the month of July the honey crop is very small this year, and most stocks of bees are short of food for the winter. If the bees are to survive until next year, stocks short of food should be fed during the autumn and winter. Syrup may be given to the stocks until the end of September. Syrup suitable for the autumn feeding of bees may be made by dissolving 5 lb. refined white sugar of good quality such as "plantation white" or "factory white" in one quart of water, after which the syrup should be brought to the boil. When cooled to blood heat it may be fed to the bees. During this month syrup may be fed rapidly to stocks that are low in sealed stores for winter feeding, and during the winter a cake of candy should be placed over the brood nest of each stock.

SEASONAL POULTRY-KEEPING NOTES.

Feeding of Pullets.—Pullets from early hatched flocks should now be in their winter laying quarters, and the feeding should be such as will encourage egg production without undue forcing. If separated milk is available, there is nothing better for bringing pullets into lay than a mash made up of ordinary cereals and wet with separated milk. A mash consisting of—

4 parts by weight pollards or sharps
2 ,, ,, ,, bran
2 ,, ,, ,, maize meal
1 part ,, ,, Sussex ground oats

is suitable for use along with separated milk. If milk is not available 1 part by weight fish meal or high grade meat and bone meal, or 1½ parts by weight extracted soya bean meal should be added to the above mixture. Where extracted soya bean meal is used as the milk substitute it is necessary to add a mineral mixture consisting of 2 parts by weight ground limestone and 1 part by weight common salt, at the rate of 2 lb. to each cwt. of meal mixture. Further examples of suitable mash mixtures to use for egg production purposes are given in Leaflet No. 3.

Housing of Pullets.—Satisfactory egg production from pullets cannot be expected unless suitable housing accommodation is provided. Damp, dirty houses lower the vitality of the birds and favour infestations of parasites which may seriously interfere with production. The houses should be well-lighted, well-ventilated, and provide ample perching and scratching accommodation. Birds on free range should be allowed about nine inches of perch and two square feet of floor space each in the house.

Parasites.—A careful watch should be kept at all times for the presence of parasites, such as lice, red mite, and fleas in the house, and measures taken to destroy these parasites immediately any are found. Maintaining the house in a clean condition is the best preventive of infestations of parasites. An occasional application, to the interior of the house, of limewash to which paraffin oil has been added at the rate of ½ pint to each gallon of wash, will aid in preventing infestations of red mite and fleas. A simple remedy for lice is to paint the tops of the perches with nicotine sulphate about half an hour before the birds go to roost.

Selection of Breeding Stock.—If not already done, the selection of hens for next year's breeding flock should be carried out as soon as possible. The importance of retaining only the best birds for breeding purposes may again be emphasised. Hens showing lack of constitutional vigour, any deformity or abnormality should be discarded, as should the under-sized birds and those which have lost weight during their pullet year. Such birds, if retained for breeding, are a hindrance to progress being made in the development of a healthy, vigorous and productive strain, irrespective of what their egg record may be.

Cockerels for next season's breeding flocks should also be chosen as soon as possible, as a better selection of birds can usually be obtained early in the season. Good size, combined with outstanding constitutional vigour, are the principal considerations in the selection of cockerels. Under-sized, fine-boned male birds should never be chosen for breeding, as they usually produce under-sized and weakly offspring. In addition to the external features the pedigree or production history of male birds for breeding should be ascertained. The factor for egg production is transmitted by the male to his pullets, and, unless the male bird has the factor for heavy egg production, the pullets bred from him will not be satisfactory layers even although they are the daughters of good laying hens. The male, therefore, should in all cases be the son of a good laying hen.

Poultry keepers who intend purchasing stock birds are reminded that it may be possible to obtain officially bred cockerels and pullets from persons who have had hens at the Pedigree Poultry Breeding Station, Hillsborough, County Down, last season. Copies of the stud book which gives the names and addresses of breeders who had birds at the Station, along with particulars of pedigrees, etc., of the hens mated, can be obtained from the Secretary of the Station, on request. An opportunity of obtaining suitable breeding stock will also be afforded at the Show and Sale of utility poultry which will be held at the Autumn Show of the Royal Ulster Agricultural Society at Balmoral, Belfast, on the 24th September next. Classes will be provided for (a) copper-ringed hens, (b) cockerels bred from copper-ringed hens at official Breeding Stations, (c) pullets bred from copper-ringed hens at official Breeding Stations. The Ministry will provisionally select cockerels which are of the standard required for poultry stations, and premium cards will be displayed on the pens occupied by the birds so selected. An auction sale of birds entered in the selling classes will take place during the Show, and this should provide a convenient means of obtaining birds for breeding. Full particulars of the breeding, egg pedigree, etc., of each bird will appear in the Show catalogue, and it should be noted also that birds entered in these classes must have passed the test for Bacillary White Diarrhoea.

Management of Birds Selected for Breeding.—Hens which have been selected for breeding and which have not as yet ceased laying, should be encouraged to do so by giving them a complete change of ground and of feeding, so that they may moult, take a rest from laying, and be in a suitable condition to produce eggs early in the forthcoming hatching season. Mash should not be given, but only a mixture of whole oats and wheat, or oats alone. Two feeds of grain daily will suffice, and the quantity given at each meal should be regulated so that the birds are hungry for the next feed. The object should be to get the birds to moult as soon as possible. When moulting

is general, the flock should be placed on stubble land, if available, as soon as it is cleared, as there is no better place for birds which are being prepared for breeding. In most cases grain feeding will not be necessary for some time after the birds are placed on the stubbles, as they will find sufficient for their needs. A daily feed of mash, consisting largely of bran, but containing no protein supplements such as fish meal, should, however, be given. It is also important to provide an ample supply of clean drinking water for the birds at all times. Further hints on the feeding and management of the breeding stock are given in Leaflet No. 83.

Blood-testing of Breeding Stock.—It is of the utmost importance to ensure that the birds selected for breeding are not "carriers" of Bacillary White Diarrhoea. This disease is still responsible for enormous losses among chicken flocks where the hatching eggs have been obtained from untested stock. The only means of controlling the disease is to have the "carriers" detected by means of blood-testing, and removed from the breeding flock. The blood-testing of poultry flocks is at present being carried out, and persons who have not yet made application to the local Poultry Instructor to have this work done should do so immediately.

Early Spring Chickens.—Now is a suitable time to hatch eggs of the heavy breeds with a view to obtaining early spring chickens for table purposes. The Light Sussex, or that breed crossed with another general purpose breed, is the most suitable for the production of table chickens.

ANNOUNCEMENTS AND REMINDERS.

GENERAL.

Winter Agricultural Classes.—The centres provisionally selected by County Committees of Agriculture for Winter Agricultural Classes to be held during the coming season are:—

County Antrim—Aghalee, Derriaghy, Cullybackey, and Ballyvoy (Ballycastle).

County Armagh—Jerretspass and Mullabawn.

County Down—Rathfriland, Loughbrickland, Hillsboro', and Ballygowan.

County Fermanagh—Florencecourt and Kilturk (Newtownbutler).

County Londonderry—Dungiven and Claudy.

County Tyrone—Gortin, Castlederg, Lakemount, Tullymuck, Castlecaulfield and Minterburn.

Particulars regarding the duration of these classes, along with a syllabus showing the subjects dealt with, are given in Leaflet No. 60. As only a limited number of pupils can be admitted to each class, those desiring to attend should make early application to the Secretary of the County Committee of Agriculture, or to the Agricultural Instructor.

Training for Girls.—The next session at the Ulster Dairy School, Cooksstown, and at the North-West School, Strabane, begins on the 13th October. Further particulars regarding the courses of instruction provided at these schools are given on pages 36 and 37 of this report.

Greenmount College.—The next session at Greenmount Agricultural and Horticultural College also begins on 13th October.

Accredited Poultry Farms.—Poultry keepers who wish to have their names included in the Ministry's Register of Accredited Poultry Farms should make application not later than the 30th September. Information relating to this Scheme is given on page 35 of this report.

Autumn Sheep Dipping.—The autumn sheep dipping period extends this year from the 5th October to the 14th November. During this period all sheep must be double dipped, allowing an interval of not less than seven or more than fourteen days between the two dippings.

Show and Sale of Utility Poultry.—Poultry-keepers intending to purchase breeding stock are reminded of the Show and Sale of Utility Poultry which will be held under the auspices of the Royal Ulster Agricultural Society at Balmoral, Belfast, on the 24th September next. Classes will be provided for copper-ringed hens, for cockerels bred from copper-ringed hens at official

Breeding Stations and for pullets bred from copper-ringed hens at official Breeding Stations. Cockerels, which are of the standard required for poultry stations, will be selected by the Ministry and premium cards will be displayed on the pens occupied by the birds so selected. The County Poultry Stations Scheme now provides for increased premiums being payable in respect of those stations on which one or more cockerels which were bred at official Breeding Stations are being used in the station pens.

Leaflets.—Copies of the leaflets issued by the Ministry are obtainable free, on request.

REGISTRATION OF ACCREDITED POULTRY FARMS.

The Ministry proposes to issue a revised Register of Accredited Poultry Farms for the hatching season 1936/37, and applications for registration must be lodged not later than the 30th September. Registration is recognised for one season only, so that breeders whose farms were registered last year should now renew their applications, if they desire to be considered for registration in the revised Register.

The object of the registration scheme is to make available to prospective purchasers of hatching eggs, day-old chicks and older stock, a list of farms from which supplies of good quality may be obtained, and, at the same time, to ensure that so far as can be ascertained the birds are free from Bacillary White Diarrhoea disease. The conditions of the scheme pertaining to registration are, therefore, designed to achieve that object, the main condition being that the stock must be tested and must all pass the test each year.

In addition, all birds on each farm must be of standard pure breeds, and of reasonably good type. No restrictions are imposed in regard to the number of breeds represented on each farm, provided that the various breeds are kept separate. In special cases breeding pens may be mated for the production of first crosses between two pure breeds. Only birds which are at least twelve months old may be included in the breeding pens.

Should an outbreak of disease occur on an accredited farm, or on another farm, and is definitely known to have originated from eggs, chicks or stock supplied by an accredited farm, the owner of the accredited farm is required to undertake to cease supplying hatching eggs, chicks or stock until an investigation has been made and it has been conclusively established as a result of blood testing that the farm is again free from disease.

Breeders intending to have their farms considered for inclusion in the Register should make application without delay to the Ministry, and in the meantime should take the necessary steps to have the condition as regards

blood testing fulfilled. Full particulars regarding fees for blood testing and other arrangements in connection with this service will be found in the Ministry's Scheme for the Blood Testing of Poultry. Copies of this Scheme, and of the Registration Scheme, together with copies of the prescribed form of application both for blood testing and for registration may be obtained, free of charge, either from the local Poultry Instructor or from the Ministry.

IMPERIAL FRUIT SHOW AND CANNERS EXHIBITION, RENSHAW HALL, LIVERPOOL.

OCTOBER 30th to NOVEMBER 7th, 1936.

The attention of fruit growers in Northern Ireland is directed to the above show and exhibition which is being held for the first time at Liverpool, a convenient centre for Northern Ireland visitors. Much valuable information can be gained from a visit to the show, and it is recommended that those interested in the production and marketing of fruit should take advantage of the opportunity thus afforded.

POTATO EXPERIMENTAL WORK.

Those who are interested in the development of the potato growing industry in Northern Ireland will have an opportunity on the 25th September of visiting the potato trials at Stormont, Belfast, and of witnessing a demonstration between the hours of 10 a.m. and 4 p.m., which has been arranged for that date. The demonstration will afford farmers an opportunity of comparing a number of new seedling varieties of potatoes with standard varieties. In addition, those interested will have an opportunity of judging for themselves the merits of selected stocks of potatoes which are free from "Mosaic" or "Leaf Roll", and of the value of the work which is being carried out in building up these stocks of selected seeds on a commercial scale.

The grounds are situated alongside the Dundonald tramlines and visitors should alight at the entrance to Stormont Castle, where directions will be given as to the location of the plots.

TRAINING OF GIRLS IN POULTRY-KEEPING, DAIRYING, ETC.

The next session at the North West School, Strabane, and the Ulster Dairy School, Cookstown, will open on 13th October. Early application for admission to either school is essential.

Admission to the North-West School, at which there is accommodation for twenty-four pupils, is by scholarships given by the County Committees of Agriculture. A sound practical training in modern economical methods of dairying, poultry-keeping and rural housewifery, is provided at the school, and the scholarships include free tuition, board and residence. Application for these scholarships should be made to the Secretary or Agricultural Organiser of the Committee of Agriculture for the County in which the applicant resides.

The Ulster Dairy School, which is situated at Loughry, Cookstown, County Tyrone, has accommodation for fifty pupils, and provides the most up-to-date training in all matters connected with women's sphere in farm life. The fees for the ordinary school course of three terms are three guineas per term. Application for admission to the Ulster Dairy School should be made direct to the Ministry's offices.

Prospectuses of both schools containing application forms may be obtained free from the Ministry on request.

IMPORTATION OF SHEEP INTO NORTHERN IRELAND FROM SCOTLAND.

Provided no unforeseen circumstances arise, the Ministry will be prepared to admit breeding sheep from the following sales to be held in Scotland during September and October, subject to the salesmasters conducting the sales complying with certain conditions laid down by the Ministry.

An officer of the Ministry will be in attendance at each of the sales for the purpose of issuing permits for the importation into Northern Ireland of animals purchased thereat, and before making any purchases persons from Northern Ireland should get into touch with him in the saleyard.

These facilities are intended for breeders only who wish to retain the animals purchased at the sales for breeding purposes. All animals imported must be moved directly from the Northern Ireland port to the farms to which they are licensed by the Ministry's Inspector, where they are to be isolated and detained for a period of not less than 14 days.

It should be understood that these arrangements may be either modified or cancelled at any time if, in the opinion of the Ministry, the disease position in Great Britain should warrant the adoption of either course.

Persons interested should, if possible, communicate with the Ministry before going to the sales.

1. Lawrie & Symington, Lanark.
   - 8th September .. .. Blackface Shearling and Lamb Rams.
   - 15th and 16th September .. All classes of Lambs, Shearling and Lamb Rams, Ewes Gimmers and Ewe Lambs.
   - 29th and 30th September .. Blackface Ewes, Leicester and Down Rams and Blackface Gimmers.
   - 16th October .. .. Blackface Rams and Lamb Rams.

2. J. Craig, Ltd., Ayr.
   - 24th and 25th September .. Blackface and Cheviot Hill Ewes and Lambs.
   - 1st and 2nd October .. Blackface and Leicester Shearling and Ram Lambs, Leicester Ewes, Gimmers and Ewe Lambs.
   - 8th October .. .. Blackface and Cheviot Hill Ewes, uncrossed, also Leicester and Blackface Rams and Ram Lambs.

3. Wallets Auction Mart, Castledouglas.
   - 23rd September .. .. Cheviot and Blackface Ewes, Gimmers, etc., also Blackface Shearling and Ram Lambs.

4. McDonald Fraser & Co., Ltd., Perth.
   - 30th September .. .. Blackface and Cheviot Hill or uncrossed Ewes.
   - 14th and 15th October .. Blackface Rams and Ram Lambs, Border Leicester and Down Shearling Rams, Border Leicester Ram Lambs, Blackface and Cheviot Ewes and Gimmers.

5. Live Stock Marts, Ltd., Stirling.
   - 2nd October .. .. Blackface Shearling Rams and Ram Lambs.
   - 6th October .. .. Uncrossed Blackface Ewes.
   - 13th October .. .. Uncrossed Blackface Ewes.

6. Watson and Batchelor, Ayr.
   - 25th September .. .. Blackface and Cheviot Ewes.
   - 1st October .. .. Breeding Ewes and Rams and Ram Lambs.

FOURTEENTH EGG-LAYING TEST AT STORMONT.

Results to End of Final Period.

The full period of 48 weeks of this test ended on the 4th September, 1936, and a detailed report, which is at present being prepared, will be published in due course. The average egg production per bird during the entire test period was 177.7 eggs. This figure is based on the flock of 900 birds originally penned, but does not include the production from the 12 White Wyandotte pullets in pens 16 and 17, of which seven died and the remaining five were returned to their owner on the 22nd June. On the same basis of calculation, the average production of scoring eggs, that is, eggs of 2 oz. each and over, was 153.6 eggs per bird.

In the following table are given particulars in respect of the pullets in the various sections of the test.

Section No.	Designation.	No. of pullets originally penned.	Average production per bird.		% scoring eggs.	% mortality.
			Total eggs.	Scoring eggs.		
1	White Wyandottes (open)	168*	172.3	155.0	89.9	11.3
2	White Leghorns (open)	48	184.5	151.6	82.3	12.5
3	Rhode Island Reds (open)	228	188.2	164.9	87.6	7.4
4	Any other Pure Breed	84	136.2	106.2	77.9	8.3
5(a)	White Wyandottes (Station Holders)	78	181.0	144.3	79.7	8.9
5(b)	White Leghorns (Station Holders)	60	165.6	154.3	92.0	23.3
5(c)	Rhode Island Reds (Station Holders)	132	182.0	163.7	90.0	8.3
6	Any Pure Breed (Poultry Clubs and Young Farmers' Clubs)	102	173.0	144.4	83.9	15.7

*Excluding the 12 birds in pens 16 and 17.

It will be seen that the Rhode Island Reds both in Sections 3 and 5(c) have, from all points of view, done best. They have produced the highest average number of scoring eggs per bird, and the rate of mortality has been lowest. Those in Section 3 have produced the highest average total of eggs per bird. The next highest average total is to the credit of the White Leghorns in Section 2, but the proportion of scoring eggs in that Section is considerably lower than in Section 5(b), where the White Leghorns all laid eggs of good size. Although the average of the total number of eggs laid by the White Wyandottes in Section 1 was comparatively low, the proportion of scoring eggs was very satisfactory, and much more so than in the case of the Wyandottes in Section 5(a). Both the average total production and the average of scoring eggs are disappointing in Section 4. In the Clubs Section the birds gave reasonably good average production. As will be seen from the last column of the table, mortality has again been highest amongst the White Leghorns. The rate of mortality in Section 5(b) is, as was the case last year, exceptionally high. The White Wyandottes in Section I also experienced a high rate of mortality which, if the deaths amongst the birds in pens 16 and 17 were included would be still higher; on the other hand the mortality amongst the White Wyandottes in Section 5(a) was comparatively low. The rate of mortality amongst the birds in the Clubs Section was also very high.

In the following table particulars are given in respect of the birds of the different breeds represented in the test, and here again the birds in pens 16 and 17 have been excluded from the calculations.

Breed.	No. of birds originally penned	Average production per bird		% scoring eggs	% mortality.
		Total eggs	Scoring eggs		
Rhode Island Red ..	420	183.8	162.2	88.2%	8.8
White Wyandottes	276	174.9	149.3	86.4	11.2
White Leghorn ..	120	174.7	154.5	87.9	17.5
Light Sussex ..	66	160.8	126.3	78.5	7.6
Barred Rock ..	6	175.9	117.7	66.9	16.6
Buff Rock ..	6	140.7	111.5	79.2	16.6
Welsummer ..	6	139.7	115.5	82.7	0.0
All birds ..		177.7	153.6	86.4	10.8

The superiority of the Rhode Island Reds over the other breeds is again evident from this table; as in average total production, and in average number of scoring eggs they are easily first. Although the rate of mortality amongst the Light Sussex is lowest, the rate in the case of the Rhode Island Reds is satisfactory in comparison, when it is realised that there were 6½ times more Rhode Island Reds than Light Sussex. The percentage mortality amongst the entire flock of 900 birds was 10.8 per cent.

The following are particulars of the leading pens in each Section.

SECTION 1. WHITE WYANDOTTES. (OPEN)

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.			Test score value.
			Super Grade.	First Grade.	Below First Grade.	
1	11	Mr. J. Hall, Lilac Cottage, Donacloney, County Down	1056	133	13	1189
2	13	Mrs. J. R. Jackson, Fortview, Coleraine, County Londonderry	879	282	39	1161
3	26	Mr. R. Tollerton, Holborn Hall, Plantation, Lisburn, County Down	664	474	102	1138
4	3	Mrs. H. G. Darley, Trory, Ballinamallard, County Fermanagh	660	466	92	1126
5	2	Mrs. D. C. Gamble, Roan Lodge, Coalisland, County Tyrone	516	607	166	1123

SECTION 2. WHITE LEGHORNS (OPEN).

1	36	Mrs. J. Warnock, Tower View, Rathgael, Bangor, County Down	295	748	148	1043
2	37	Mr. J. Waugh, Ballyrickard, Kilwaughter, Larne, County Antrim	537	504	104	1041
3	31	Mrs. F. R. Browne, Lakeview, Enniskillen, County Fermanagh	624	411	106	1035

SECTION 3. RHODE ISLAND REDS (OPEN).

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.			Test score value.
			Super Grade.	First Grade.	Below First Grade.	
1	63	Mrs. D. Patterson, Ballycastle Road, Coleraine, County Londonderry.	673	593	48	1266
2	39	Mrs. R. A. Abernethy, Cherry Hill, Stewartstown, County Tyrone.	791	462	152	1253
3	41	Mr. R. A. Copeland, Blackscull, Dromore, County Down.	864	367	45	1231
4	46	Mr. T. Foote, Broughmore, Maze, Lisburn, County Antrim.	910	315	37	1225
5	70	Miss R. L. Sinclair, Ballybirnie, Holyhill, Strabane, County Tyrone.	702	503	113	1205
6	51	Miss J. A. Irwin, Mount Irwin, Tynan, County Tyrone.	658	546	78	1204

SECTION 4. ANY OTHER PURE BREED.

1	84	Mrs. J. W. Murland, Ardnabannon, Annsboro', County Down.	596	422	142	1018
2	83	Mrs. H. W. Merrick, Agivey House, Aghadowey, County Londonderry.	632	341	78	973
3	82	Miss C. C. Meara, Coalisland, County Tyrone. (All Light Sussex).	320	630	91	950

SECTION 5(*a*). WHITE WYANDOTTES (STATION-HOLDERS).

1	99	Mrs. M. Rodgers, Ballyginney, Dundrum, County Down.	774	381	102	1155
2	95	Mrs. R. McCullough, Bruslee, Ballyclare, County Antrim.	635	415	57	1050
3	101	Mrs. E. Warmington, Lake View, Newtownhamilton, County Armagh.	496	526	101	1022

SECTION 5(*b*). WHITE LEGHORNS (STATION-HOLDERS).

1	113	Mrs. J. Brown, Gorsebank, Culcrum, County Antrim.	697	387	96	1084
2	108	Mrs. J. Knox, Shanmullagh, Ederney, County Fermanagh.	762	311	101	1073
3	109	Mrs. M. Noble, Roundpark House, Killycramph, Lisnaskea, County Fermanagh.	892	177	10	1069

SECTION 5(*c*). RHODE ISLAND REDS (STATION-HOLDERS).

Position.	No. of Pen.	Name and Address of Owner.	Number of eggs laid.			Test score value.
			Super Grade.	First Grade.	Below First Grade.	
*	120	Mrs. M. D. Bell, Woodview, Moneymore, County Londonderry.	788	440	54	1228
1	125	Mrs. M. McClintock, Laymore, Ballymena, County Antrim.	524	644	122	1168
2	126	Mrs. R. McGiffert, Rathcunningham, Toye, County Down.	804	351	96	1156
*	118	Miss M. L. Fleming, Ballymenagh, Dungannon, County Tyrone.	694	447	47	1141
3	121	Miss J. Kane, Dartries, Castlerock, County Londonderry.	387	726	110	1113
4	116	Mr. K. Dunlop, Scarva, County Down.	635	421	134	1056
5	114	Miss A. Cottney, Woodcroft, Hillsborough, County Down.	825	223	2	1048
		*Ineligible for any award as two birds died.				

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS.

1	149	Banbridge and District Poultry Club County Down. (Rhode Island Reds).	674	578	70	1252
2	141	Ballyclare Poultry Club, County Antrim. (White Leghorns).	636	540	68	1176
3	136	Ballywalter Young Farmers' Club, County Down. (White Wyandottes).	529	539	89	1068
4	152	Garvagh Poultry Club, County Londonderry. (Rhode Island Reds).	602	447	185	1049
5	151	Dungiven Young Farmers' Club, County Londonderry. (Rhode Island Reds).	645	391	47	1036

The "test score value" means the total of the super grade and first grade eggs.

The leading pens in the entire test are—

1st—No. 63.—Rhode Island Reds owned by Mrs. D. Patterson, Ballycastle Road, Coleraine, County Londonderry—Score 1,266 super grade and first grade eggs.

2nd—No. 39.—Rhode Island Reds owned by Mrs. R. A. Abernethy, Cherry Hill, Stewartstown, County Tyrone—Score 1,253 eggs.

3rd—No. 149.—Rhode Island Reds owned by members of Banbridge and District Poultry Club, County Down—Score 1,252 eggs.

The figures in this report are provisional pending the final checking of the record books.

The awards for the pens of birds of best type have been made as follows :—

White Wyandottes—

Winner—Pen 2, owned by Mrs. D. C. Gamble, Roan Lodge, Coalisland, County Tyrone.

Runner-up—Pen 13, owned by Mrs. J. R. Jackson, Fortview, Coleraine, County Londonderry.

White Leghorns—

Winner—Pen 31, owned by Mrs. F. R. Browne, Lakeview, Enniskillen, County Fermanagh.

Runner-up—Pen 36, owned by Mrs. J. Warnock, Tower View, Rathgael, Bangor, County Down.

Rhode Island Reds—

Winner—Pen 59, owned by Mrs. McNeill, Drain's Bay, Larne, County Antrim.

Runner-up—Pen 39, owned by Mrs. R. A. Abernethy, Cherry Hill, Stewartstown, County Tyrone.

Light Sussex—

Winner—Pen 83, owned by Mrs. H. W. Merrick, Agivey House, Aghadowey, County Londonderry.

Runner-up—Pen 84, owned by Mrs. J. W. Murland, Ardnabannon, Annsboro', County Down.

AWARD OF COPPER RINGS TO LAYING TEST BIRDS.

The fourteenth egg laying test at Stormont ended on the 4th September, and all birds which laid 200 or more eggs weighing at least 2 oz. each, which were passed by the judge as being of suitable type for breeding, and which passed the test for Bacillary White Diarrhoea disease, were marked with sealed numbered copper rings supplied by the National Poultry Council. Full particulars of the egg production of these birds will appear in the final report on the test which will be published by the Ministry, and also in the Register of Laying Trials which will be published by the National Poultry Council.

Birds which received copper rings, and the numbers of these rings, are as follows :—

SECTION 1. WHITE WYANDOTTES.

Pen No.	Test No. of Bird.	Name and Address of Owner.	Copper Ring No
1	6	Mrs. M. Barnett, Ballagh, Clogher, Co. Tyrone.	U 1/36
2	8	Mrs. D. C. Gamble, Roan Lodge, Coalisland, Co. Tyrone.	U 2/36
,,	11	do. do. do.	U 3/36
,,	12	do. do. do.	U 4/36
3	15	Mrs. H. G. Darley, Trory, Ballinamallard, Co. Fermanagh.	U 5/36
6	36	Mr. T. Foote, Broughmore, Maze, Lisburn, Co. Antrim.	U 6/36
7	37	Lieut.-Col. J. P. Galbraith, Clanabogan, Omagh, Co. Tyrone.	U 7/36
,,	38	do. do. do. do.	U 8/36
10	57	Greenmount Agricultural & Horticultural College, Muckamore, Antrim.	U 10/36
11	62	Mr. J. Hall, Lilac Cottage, Donacloney, Co. Down.	U 11/36
,,	63	do. do. do.	U 12/36
,,	64	do. do. do.	U 13/36
,,	66	do. do. do.	U 14/36
12	67	Mrs. J. R. Jackson, Fortview, Coleraine, Co. Derry.	U 15/36
,,	72	do. do. do.	U 16/36
13	73	do. do. do.	U 17/36
,,	74	do. do. do.	U 18/36
,,	78	do. do. do.	U 19/36
14	81	Mrs. E. Johnstone, Craigboy, Donaghadee, Co. Down.	U 20/36
15	85	Mr. G. McCormick, Brookend, Stewartstown, Co. Tyrone.	U 21/36
,,	89	do. do. do. do.	U 22/36
19	111	Mr. G. N. Robson, Ballyhamage, Doagh, Co. Antrim.	U 23/36
,,	113	do. do. do.	U 24/36
20	115	Mr. J. L. Savage, Backaderry House, Banbridge, Co. Down	U 25/36
,,	118	do. do. do. do.	U 26/36
22	129	Mrs. H. E. Stevenson, Dreemore, Dungannon, Co. Tyrone.	U 27/36
,,	131	do. do. do. do.	U 28/36
23	133	do. do. do. do.	U 29/36
,,	135	do. do. do. do.	U 30/36
,,	137	do. do. do. do.	U 31/36
24	143	Mr. J. C. Stewart, Balloo, Killinchy, Co. Down.	U 32/36
26	151	Mr. R. Tolerton, Holborn Hall, Plantation, Lisburn.	U 33/36
,,	155	do. do. do.	U 34/36
,,	156	do. do. do.	U 35/36
27	159	Villa Colony Poultry Farm, Purdysburn, Belfast.	U 36/36
,,	162	do. do. do.	U 37/36
30	177	Mr. H. L. Watson, Mount Nebo, Gilnahirk, Knock, Belfast.	U 38/36
,,	179	do. do. do. do.	U 39/36

SECTION 2. WHITE LEGHORNS.

31	183	Mrs. F. R. Browne, Lakeview, Enniskillen, Co. Fermanagh.	U 40/36
,,	184	do. do. do. do.	U 41/36
,,	186	do. do. do. do.	U 42/36
33	193	Mr. W. Gunning, Inglenook, Ballywalter, Co. Down.	U 43/36
34	202	Mrs. E. Johnstone, Craigboy, Donaghadee, Co. Down.	U 44/36
37	218	Mr. J. Waugh, Ballyrickard, Kilwaughter, Larne, Co. Antrim.	U 45/36
38	224	Mrs. E. D. Workman, Legamaddy House, Downpatrick, Co. Down	U 46/36

SECTION 3. RHODE ISLAND REDS.

39	229	Mrs. R. A. Abernethy, Cherry Hill, Stewartstown, Co. Tyrone.	U 47/36
,,	231	do. do. do. do.	U 48/36
,,	232	do. do. do, do.	U 49/36
,,	233	do. do. do. do.	U 50/36
,,	234	do. do. do. do.	U 51/36

SECTION 3. RHODE ISLAND REDS—*Continued.*

Pen No.	Test No. of Bird.	Name and Address of Owner.	Copper Ring No
41	241	Mr. R. A. Copeland, Blackscull, Dromore, Co. Down.	U 52/36
,,	243	do. do. do.	U 53/36
,,	245	do. do. do.	U 54/36
,,	246	do. do. do.	U 55/36
42	247	Miss M. C. Dunlop, Annemount, Keady, Co. Armagh.	U 56/36
,,	249	do. do. do.	U 57/36
43	256	Mrs. H. Farr, Ballyginney, Dundrum, Co. Down.	U 58/36
44	261	Mrs. M. Finlay, Langfield Poultry Farm, Armoy, Co. Antrim.	U 59/36
,,	263	do. do. do. do.	U 60/36
45	265	Mr. T. Foote, Broughmore, Maze, Co. Antrim.	U 61/36
46	272	do. do. do.	U 62/36
,,	273	do. do. do.	U 63/36
,,	275	do. do. do.	U 64/36
,,	276	do. do. do.	U 65/36
47	278	Mrs. H. Getty, Hillcrest, Newtownards, Co. Down.	U 66/36
,,	280	do. do. do.	U 67/36
,,	281	do. do. do.	U 68/36
48	286	do. do. do.	U 69/36
49	289	Mrs. G. Hegan, Skeerygroom, Dungannon, Co. Tyrone	U 70/36
,,	290	do. do. do.	U 71/36
50	295	Mr. H. L. Watson, Mount Nebo, Gilnahirk, Knock, Belfast.	U 72/36
,,	298	do. do. do. do.	U 73/36
,,	300	do. do. do. do.	U 74/36
51	301	Miss J. A. Irwin, Mount Irwin, Tynan, Co. Armagh.	U 75/36
,,	302	do. do. do.	U 76/36
,,	303	do. do. do.	U 77/36
,,	305	do. do. do.	U 78/36
53	318	Miss E. E. Kennedy, Tullyreagh, Glarryford, Co. Antrim.	U 79/36
54	319	Langford Lodge Poultry Farm, Crumlin, Co. Antrim.	U 80/36
55	330	Mr. W. McCullough, Carnalbanagh, Ballymena, Co. Antrim.	U 81/36
59	350	Mrs. J. McNeill, Drain's Bay, Larne, Co. Antrim.	U 83/36
,,	352	do. do. do.	U 84/36
,,	353	do. do. do.	U 85/36
60	357	Mr. J. O'Hanlon, Violet Cottage, Unshinagh, Portadown, Co. Armagh	U 86/36
,,	360	do. do. do. do.	U 87/36
62	370	Mr. J. R. C. Patrick, Carnoff, Dervock, Co. Antrim.	U 88/36
,,	372	do. do. do.	U 89/36
63	373	Mr. D. Patterson, Ballycastle Road, Coleraine, Co. Derry.	U 90/36
,,	374	do. do. do. do.	U 91/36
,,	375	do. do. do. do.	U 92/36
,,	376	do. do. do. do.	U 93/36
64	383	Mr. W. Patton, The Hill, Loughries, Newtownards, Co. Down.	U 94/36
66	392	Mr. Meredith Scott, Crumlin, Co. Antrim.	U 95/36
,,	394	do. do. do.	U 96/36
67	397	do. do. do.	U 97/36
,,	399	do. do. do.	U 98/36
,,	400	do. do. do.	U 99/36
68	404	do. do. do.	U100/36
69	411	Miss. M. Shields, Tamanyagan, Park, Dungiven, Co. Derry.	U101/36
70	†415	Miss R. L. Sinclair, Ballybirnie, Holyhill, Strabane, Co. Tyrone.	U102/36
,,	417	do. do. do. do.	U103/36
,,	418	do. do. do. do.	U104/36
71	421	Mrs. H. E. Stevenson, Dreemore, Dungannon, Co. Tyrone.	U105/36
72	431	Mr. T. E. Taylor, Ballyrobert, Craigavad, Co. Down.	U106/36
,,	432	do. do. do.	U107/36
73	434	do. do. do.	U108/36
75	447	Mrs. E. R. Dunwoody, Benmore, Islandmagee, Co. Antrim.	U109/36
,,	448	do. do. do. do.	U110/36

†Purchased by Mr. T. J. McMillan, Crossgar, Co. Down.

SECTION 4. ANY OTHER PURE BREED.

Pen No.	Test No. of Bird.	Name and Address of Owner.	Copper Ring No.
78	*467	Miss L. L. Connor, The Dairies, Drumcose, Enniskillen, Co. Fermanagh	U111/36
80	475	Greenmount Agric. & Hort. College, Muckamore, Antrim.	U112/36
82	492	Miss C. C. Meara, Coalisland, Co. Tyrone.	U113/36
83	494	Mrs. H. W. Merrick, Agivey House, Aghadowey, Co. Derry.	U114/36
,,	495	do. do. do. do.	U115/36
84	499	Mrs. J. W. Murland, Ardnabannon, Annsboro', Co. Down.	U116/36
88	523	Mr. T. J. McMillan, Crossgar, Co. Down. (No. 523 Barred Rock, others Light Sussex.)	U117/36
		*Purchased by Mr. S. A. Upton, Drumscill, Maze, Lisburn.	

SECTION 5(*a*). WHITE WYANDOTTES (STATION-HOLDERS).

92	549	Miss H. Knox, Templepatrick House, Donaghadee, Co. Down.	U118/36
94	559	Miss M. McAllister, Turnpike House, Backnamullagh, Dromore, Co. Down.	U119/36
,,	564	do. do. do. do.	U120/36
95	568	Mrs. R. McCullough, Bruslee, Ballyclare, Co. Antrim.	U121/36
96	573	Mrs. R. McDowell, Glenford, Glenoe, Larne, Co. Antrim.	U122/36
98	584	Mrs. W. K. McAlister, Loughview, Woodburn, Carrickfergus, Co. Antrim.	U123/36
99	592	Mrs. M. Rodgers, Ballyginney, Dundrum, Co. Down.	U124/36
100	597	Mrs. M. J. Veitch, Knockninney, Thompson's Bridge, Co. Fermanagh.	U125/36
101	602	Mrs. M. E. Warmington, Lakeview, Newtownhamilton, Co. Armagh.	U126/36
103	613	Mrs. J. Armstrong, Keeranbeg House, Donagh, Lisnaskea, Co. Fermanagh.	U127/36

SECTION 5(*b*). WHITE LEGHORNS (STATION-HOLDERS).

104	620	Mrs. W. Crawford, Redergan, Beragh, Co. Tyrone.	U128/36
105	625	Miss J. Gilmer, Rashee, Ballyclare, Co. Antrim.	U129/36
,,	629	do. do. do.	U171/36
108	643	Mrs. J. Knox, Shanmullagh, Ederney, Co. Fermanagh.	U130/36
,,	645	do. do. do.	U131/36
109	652	Mrs. M. Noble, Roundpark House, Killycramph, Lisnaskea, Co. Fermanagh.	U132/36
,,	653	do. do. do. do.	U133/36
110	657	Mrs. E. A. Paul, Divernagh, Bessbrook, Co. Armagh.	U134/36
112	*669	Miss M. Whyte, Derryboy, Crossgar, Co. Down.	U135/36
,,	672	do. do. do.	U136/36
113	673	Mrs. J. Brown, Gorsebank, Culcrum, Co. Antrim.	U137/36
,,	675	do. do. do.	U138/36
		*Purchased by Mr. T. J. McMillan, Crossgar, Co. Down.	

SECTION 5(*c*). RHODE ISLAND REDS (STATION-HOLDERS).

114	679	Miss A. Cottney, Woodcroft, Hillsborough, Co. Down.	U139/36
,,	681	do. od. do.	U140/36
,,	682	do. do. do.	U141/36
,,	683	do. do. do.	U142/36

SECTION (*c*). RHODE ISLAND REDS (STATION-HOLDERS)—*Continued.*

Pen No.	Test No. of Bird.	Name and Address of Owner.	Copper Ring No
115	687	Mrs. M. Dillon, Corvally, Armoy, Co. Antrim.	U143/36
116	693	Mr. K. R. Dunlop, Scarvagh P. Farm, Scarva, Co. Down.	U185/36
,,	696	do. do. do. do.	U144/36
117	699	Mrs. R. J. Dunn, Ballyskeagh, Artigarvan, Co. Tyrone.	U145/36
,,	701	do. do. do. do.	U146/36
,,	702	do. do. do. do.	U147/36
118	706	Miss M. L. Fleming, Ballymenagh, Dungannon, Co. Tyrone.	U148/36
120	716	Mrs. M. D. Bell, Woodview, Moneymore, Co. Derry.	U149/36
,,	717	do. od. do.	U150/36
,,	719	do. do. do.	U151/36
121	721	Miss J. Kane, Dartries, Castlerock, Co. Derry.	U152/36
,,	722	do. do. do.	U153/36
,,	725	do. do. do.	U154/36
123	738	Mrs. S. B. Lyons, Ballindreen, Coleraine, Co. Derry.	U155/36
124	742	Mrs. W. McCallum, Aldohil House, Newtownstewart, Co. Tyrone.	U156/36
125	745	Mrs. M. McClintock, Laymore, Ballymena, Co. Antrim.	U157/36
,,	746	do. do. do.	U158/36
126	752	Mrs. R. McGiffert, Rathcunningham, Toye, Co. Down.	U159/36
,,	754	do. do. do.	U160/36
,,	756	do. do. do.	U161/36
127	758	Mrs. J. A. McKee, Aughnagurgan, Keady, Co. Armagh	U162/36
128	764	Miss S. McKee, Ardmillen House, Killinchy, Co. Down.	U163/36
,,	766	do. do. do.	U164/36
129	771	Mrs. J. McMaster, Little Ballymena, Broughshane, Co. Antrim.	U165/36
131	781	Mr. S. Murphy, Killynure, Carryduff, Co. Down.	U166/36
133	795	Mrs. E. M. Rea, Carran House, Ballygawley, Co. Tyrone.	U167/36
135	805	Mrs. M. Stockdale, Ballynoe, Downpatrick, Co .Down.	U168/36

SECTION 6. POULTRY CLUBS AND YOUNG FARMERS' CLUBS.

136	812	Ballywalter Young Farmers' Club, Co. Down.	W.W.	U169/36
,,	816	do. do. do.	W.W.	U170/36
137	818	Crossgar Poultry Club, Co. Down.	W.W.	U172/36
141	842	Ballyclare Poultry Club, Co. Antrim.	W.L.	U173/36
,,	845	do. do.	W.L.	U174/36
,,	846	do. do.	W.L.	U175/36
144	860	do. do.	W.L.	U176/36
148	885	Ballywalter Young Farmers' Club, Co. Down.	R.I.R.	U177/36
,,	888	do. do. do.	R.I.R.	U178/36
149	889	Banbridge and District Poultry Club, Co. Down.	R.I.R.	U179/36
,,	890	do. do. do.	R.I.R.	U180/36
,,	893	do. do. do.	R.I.R.	U181/36
151	903	Dungiven Young Farmers' Club, Co. Derry.	R.I.R.	U182/36
152	909	Garvagh Poultry Club, Co. Derry.	R.I.R.	U183/36
,,	911	do. do.	R.I.R.	U184/36

PRICES OF FEEDING STUFFS.

The following table shows the average retail prices per cwt. of Feeding Stuffs at 1st September, 1936, with comparative figures for the corresponding date in 1935.

	1936.					1935.				
	Price per cwt.	Protein equivalent	Price per unit of protein equivalent	Starch equivalent	Price per unit of starch equivalent	Price per cwt.	Protein equivalent	Price per unit of protein equivalent	Starch equivalent	Price per unit of starch equivalent
STARCHY FOODS:	s. d.		s. d.		s. d.	s. d.		s. d.		s. d.
Maize (whole)	6 8	6.8	19 7	81.5	1 7½	4 8	6.8	13 9	81.5	1 2
Maize Meal	7 1¾	6.8	21 0	81.5	1 9	5 1	6.8	14 11	81.5	1 3
Bran, Red	7 7	10.0	15 2	45.3	3 4	6 10	10.0	13 8	45.3	3 0
Bran, White	8 8½	10.0	17 5	45.3	3 10	7 10	10.0	15 8	45.3	3 5
Pollard, Brown	7 8½	11.0	14 0	71.2	2 2	7 2	11.0	13 0	71.2	2 0
Pollard, White	8 8¼	11.0	15 9½	71.2	2 5½	7 11	11.0	14 5	71.2	2 3
Barley Meal	8 4¾	6.2	26 11½	69.7	2 4¾	7 5	6.2	23 11	69.7	2 2
Oats	5 3	7.6	13 10	60.0	1 9	7 8	7.6	20 2	60.0	2 7
Wheat (Whole)	9 0¾	9.6	18 10½	72.0	2 6	—	9.6	—	72.0	—
PROTEIN FOODS:										
Linseed Cake, home-made ..	10 9½	25.0	8 7½	71.8	3 0	10 1	25.0	8 1	71.8	2 10
Linseed Cake, foreign	9 11¾	25.0	8 0	71.8	2 9¼	9 1	25.0	7 3	71.8	2 6
Linseed Cake Meal	10 4¼	25.0	8 4	72.8	2 10	9 5	25.0	7 6	72.8	2 7
Cotton Cake, decorticated ..	9 1¾	35.0	5 3	71.2	2 7	9 1	35.0	5 2	71.2	2 7
Earth Nut Cake, decorticated ..	9 0¾	41.0	4 5	73.0	2 6	8 7	41.0	4 2	73.0	2 4
Soya Bean Meal (extracted) ..	10 2	38.0	5 4	64.0	3 2	8 8	38.0	4 7	64.0	2 9
Fish Meal (60% protein) ..	15 9	53.0	5 11½	58.9	5 4	16 3	53.0	6 2	58.9	5 6
Meat and Bone Meal (40% protein)	9 9	36.2	5 4½	44.0	4 5	9 6	36.2	5 3	44.0	4 4
Meat and Bone Meal (60%protein)	13 8	54.9	5 0	61.3	4 5½	14 1	54.9	5 2	61.3	4 7
OTHER FEEDING STUFFS:										
Linseed, whole	15 8¼	19.0	16 6	119.2	2 7½	15 1	19.0	15 11	119.2	2 6
Palm Nut Cake	8 0½	17.0	9 6	70.2	2 3½	7 10	17.0	9 3	70.2	2 3
Palm Nut Meal	8 0	17.0	9 5	78.0	2 1	8 1	17.0	9 6	78.0	2 1
Potatoes	3 3¼	0.6	109 0	18.0	3 7½	3 10	0.6	127 9	18.0	4 3
Oat Straw	2 2	0.9	48 4	20.0	2 2	1 8	0.9	37 0	20.0	1 8

PRICES OF FEEDING STUFFS.

One of the objects of the foregoing table is to guide farmers in the economic purchase of feeding stuffs.

Ignoring their mineral content, the valuable constituents of any feeding stuff, whether home-grown or purchased, consist of :—

(1) Carbohydrates—a group of substances which include materials such as starch, sugar, etc. They supply heat or energy to the animal, and the surplus is stored by the animal as fat.

(2) Oil—which also provide heat or energy, the surplus being stored as fat. For this purpose oil is approximately 2½ times as valuable as the carbohydrates, but its presence in the ration in excessive quantities may lower the digestibility of the ration and cause digestive troubles.

(3) Protein—The group of bodies termed protein or albuminoids contain nitrogen. Protein is the only ingredient of a feeding stuff which can produce flesh or muscle, and hence its special importance.

All animals require a certain amount of each of the above constituents, but the relative amounts depend upon the class of stock. Thus, for example, a two-year-old fattening bullock requires a relatively small amount of protein (flesh forming material). Its ration should consist mainly of foods rich in carbohydrates, i.e., fat producing substances. On the other hand, a dairy cow is producing milk, which is a substance rich in protein, and as the protein that is flesh forming material in milk, can only be derived from the protein in the food, the ration for the dairy cow must contain considerably more protein than that for the fattening bullock.

There are very wide differences in the composition of feeding stuffs, both home grown and purchased. Some, such as oats and maize, are rich in carbohydrates, and, therefore, particularly valuable for fattening purposes, whilst others, such as decorticated cotton cake, earthnut cake and linseed cake, are rich in protein, and are chiefly valuable for their flesh and milk-producing properties.

In the following table the composition of some of the more commonly used feeding stuffs is shown :—

PERCENTAGE COMPOSITION.

	Water.	Protein.	Oil.	Carbohydrates.
Turnips (Swedes)	88	1	0.2	9
Potatoes	75	2	0.1	21
Oat Straw	14	4	2	37
Meadow Hay	10	10	3	45
Pasture Grass	80	3.5	0.8	10
Cabbage	89	1.5	0.5	8
Fattening Foods :				
Oats	13	9	6	60
Maize Meal	12	10	4	70
Barley Meal	13	12	2	66
Flesh Forming Foods :				
Linseed Cake	11	30	10	35
Decorticated Cotton Cake	9	40	9	26

The farmer frequently asks what is the cheapest feeding stuff to buy. It is, however, often very difficult to give a direct answer. Much depends upon what the feeding stuff is required for, whether for fattening or milk production. Again, maize and oats are essentially fattening foods, whilst decorticated cotton cake is a flesh-forming food, and it would be just as futile to use the cost per ton to compare their values as it would be to use the cost per ton to compare the values of, say, sulphate of ammonia and superphosphate.

Foods of similar composition can, however, be compared, and it is possible for the enterprising farmer to effect considerable economies, not only in the use of home-grown feeding stuffs, but particularly in the purchase of concentrated feeding stuffs, by studying the market prices.

The starch equivalent figure is a measure of the energy, heat or fat producing value of the feeding stuff, and shows the number of pounds of starch which would be required to give the same heat or energy as 100 lb. of the feeding stuff. For example, the table on page 49 states that the starch equivalent of maize meal is 81½, or, in other works, 100 lb. of maize meal will provide as much heat or energy as 81½ lb. of pure starch.

The protein equivalent figure shows the number of pounds of digestible flesh or muscle producing material in 100 lb. of each of the feeding stuffs listed.

PRICES OF FAT STOCK.

The following were the average prices per live cwt. of bullocks and heifers, sold at Belfast Auction Marts during each of the four weeks ended 25th August, 1936:—

Week ended.	Bullocks.		Heifers.	
	s.	d.	s.	d.
4th August ...	37	0	36	9
11th August ...	35	6	35	3
18th August ...	34	6	34	6
25th August ...	33	9	33	6

PRICES OF LIVE STOCK.

Average Prices of Live Stock at Fairs during the month of August, 1936.

Date	Fair	Calves (under 9 months)	Store Cattle	Fat Cattle (18 months and over)	Springers		Milch Cows	Store Sheep		Fat Lambs (under 12 months old)	Young Pigs
					Cows	Heifers		Feeding Lambs (under 12 months old)	Breeding Ewes		
		Per head £ s.	Per cwt. Live weight.	Per cwt. Live wgt.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.	Per head £ s.
1	Strabane ..	—	35/– to 37/–	32/–	12 5	—	11 15	—	—	—	—
4	Omagh ..	5 10	36/– to 39/–	32/6	14 10	13 10	13 0	†1 2/6	†1 15	†1 11/6	—
5	Londonderry	—	28/6 to 34/6	32/–	17 0	14 10	—	—	—	†1 9	1 7
6	Ballymoney ..	5 11	31/9 to 35/3	31/6	13 17/6	12 2/6	12 7/6	—	—	†1 6	1 7/6
7	Moy ..	—	30/– to 38/6	33/–	15 15	12 15	15 17/6	—	—	†1 8/9	—
8	Irvinestown	5 7/6	31/– to 34/–	30/–	15 0	14 0	—	—	‡1 15 †1 10	‡1 10 †1 7/6	1 10
10	Enniskillen	4 7	23/– to 30/–	33/6	13 0	12 0	12 0	—	—	‡1 5	1 7
11	Dungiven ..	—	29/– to 34/6	31/–	14 15	12 7/6	—	†1 0	—	†1 10	1 6/6
12	Crossgar ..	—	32/– to 34/–	—	16 0	—	14 10	—	—	—	1 10
14	Ballygawley	—	27/– to 35/6	30/–	14 0	—	13 0	†1 12/6	†1 17/6	—	1 7/6
15	Portadown ..	5 5/9	29/– to 34/–	32/–	16 0	14 0	16 0	—	—	—	1 12/6
17	Camlough ..	4 10	23/– to 29/6	31/6	14 0	12 10	12 0	—	—	†1 8	—
19	Lisnaskea ..	4 9/6	27/– to 38/–	31/6	15 0	14 15	13 10	—	—	—	1 12/6
20	Ballynahinch	—	32/– to 34/–	—	16 15	14 10	15 0	—	—	†1 7	1 10
21	Moneymore	4 7	29/– to 32/–	30/–	14 5	13 5	12 0	*– 17/6	†2 1/3	†1 10	1 10
22	Fintona ..	5 6/9	34/– to 38/–	32/–	14 10	13 0	13 10	*– 12/6	†2 0	†1 12/6	1 10
25	Ballycastle ..	5 10	32/– to 33/–	36/–	14 2/6	14 15	—	†1 7 *– 15/6	†2 0 *1 8	†1 11/9	1 3/9
27	Antrim ..	—	—	—	20 0	15 10	17 0	—	—	—	1 8
28	Castlederg ..	4 10	32/– to 36/–	32/–	13 10	—	—	*– 12/–	†1 15	†1 12	1 8
28	Killylea ..	—	—	30/6	14 10	—	13 10	†1 12/6	†2 2/6	—	—
29	Ballymena ..	6 4/6	23/– to 35/–	—	20 0	20 0	19 0	—	—	—	1 7

* Mountain. † Downs and Cross. ‡ Long Wools.

IMPORTS AND EXPORTS.

Table showing the Imports and Exports through Northern Ireland ports of certain Agricultural Products during the month ended 31st July, 1936, and the seven months ended 31st July, 1936, with comparative figures for the corresponding periods in 1935.

(These figures are supplied through the courtesy of the Ministry of Commerce and are subject to revision).

COMMODITY	IMPORTS.				EXPORTS.			
	Month ended 31st July.		Seven months ended 31st July.		Month ended 31st July.		Seven months ended 31st July.	
	1936	1935	1936	1935	1936	1935	1936	1935
Bacon .. .. cwt.	1,728	1,667	11,001	20,126	38,454	18,858	225,111	120,938
Hams .. .. cwt.	1,733	1,142	5,612	5,210	14,414	8,284	82,197	73,844
Pork .. .. cwt.	—	—	49	6	3,808	2,116	24,877	26,027
Butter .. .. cwt.	11,217	3,128	91,322	92,594	1,415	1,453	3,196	3,253
Eggs .. .. gt. hds.	6,390	2,898	48,443	41,008	496,884	311,151	2,443,297	2,268,441
Oat Products (inc. Oatmeal) cwt.	2,535	2,347	15,987	12,365	3,137	3,293	47,856	53,888
Potatoes .. .. tons	177	25	279	148	14,503	7,295	181,736	95,449
Poultry .. .. cwt.	8	11	129	151	11,575	7,180	109,656	100,741
Grass Seeds .. cwt.	1,021	429	8,000	33,833	5,417	1,745	269,489	219,247

There were 7,143 cwts. of oats imported direct through Northern Ireland ports from abroad during the month of July, 1936. Imports direct from places abroad during the corresponding month of 1935 amounted to 11,430 cwts.

SHIPMENTS OF LIVE STOCK.

Statement showing the Shipments of Live Stock from Northern Ireland ports during the following periods:—
Months of August, 1936, July, 1936, August, 1935; Eight Months ended 31st August, 1936, and 31st August, 1935.

PORTS OF:—	CATTLE.						SHEEP.				PIGS.			Horses
	Fat.	Stores.	Milch Cows.	Springers.	Calves.	Total.	Fat.	Stores.	Lambs.	Total.	Fat.	Stores.	Total.	
Belfast	4,804	4,167	1,932	247	—	11,150	99	1	17,884	17,984	1,992	—	1,992	261
Larne	12	1,709	—	8	1	1,730	—	199	7,596	7,795	653	—	653	35
Londonderry ..	110	5,107	87	89	172	5,565	82	—	10,113	10,195	284	—	284	5
Newry	46	201	—	1	—	248	2	—	1,653	1,655	—	—	—	—
Total, August, 1936 ..	4,972	11,184	2,019	345	173	18,693	183	200	37,246	37,629	2,929	—	2,929	301
Total, July, 1936 ..	4,797	13,059	1,584	457	144	20,041	125	5	36,269	36,399	4,185	59	4,244	441
Total, August 1935 ..	4,372	7,157	2,017	583	135	14,264	—	—	25,332	25,332	7,997	122	8,119	331
Total, Eight Months ended 31st August, 1936	53,058	115,462	10,388	1,655	12,286	192,849	6,592	205	109,587	116,384	30,959	404	31,363	3,948
Total, Eight Months ended 31st August, 1935	47,926	130,018	10,829	2,322	15,422	206,517	13,336	—	92,259	105,595	56,650	2,360	59,010	4,094

Table showing the numbers of Live Stock (1) exposed for sale, and (2) sold at 19 fairs in Northern Ireland during the months of August, 1935, and July and August, 1936:—

Description of Live Stock.	August, 1935.		July, 1936.		August, 1936.	
	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.	Number exposed for sale.	Number sold.
Store Cattle ...	7,785	4,288	5,848	4,525	6,763	4,922
Fat Cattle ...	900	742	1,267	1,155	1,323	1,221
Dairy Cattle ...	1,656	1,211	1,297	1,074	1,516	1,133
Sheep ...	612	407	284	159	652	482
Lambs ...	3,014	2,240	1,906	1,599	2,398	1,989
Young Pigs ...	3,040	2,555	3,437	2,587	2,814	2,193

Trade for the larger numbers of store and fat cattle offered at fairs held during August was steady in the beginning of the month, but the arrival of warmer weather marked a falling off in the demand and a consequent cheapening of prices. Best quality large stores sold readily throughout August, although prices from the middle of the month were easier. Small stores also sold well to grazers at the beginning of August, but later were harder to cash. Second and third quality animals generally recorded a marked reduction in price during the month. The fat cattle offered for sale were generally of a high standard of quality, and good clearances were effected at satisfactory rates in the beginning of the month, although later they eased to below the July levels. Dairy cattle were also in larger supply, and whilst the majority of the animals were not of good quality and in dull request, the limited supply of first-class stock met a keen demand and was quickly bought up at firmer rates. Good young springing cows and heifers were the principal attraction, and for these shippers bid keenly. In the sheep section there were seasonal increases in supplies, principally due to the Lammas fair at Ballycastle, and trade generally was of a satisfactory nature. Fat lambs remained in good request at fully late rates, whilst store lambs for feeding also sold well at prices that were higher than those obtained at the corresponding date a year ago. Breeding ewes also met a good enquiry and fetched higher rates than a year ago.

Young pigs were in smaller supply than in July, and trade for these slackened as the result of the rise in prices of feeding stuffs. None the less a good volume of business was transacted at cheaper rates.

Small numbers of sows for breeding were mostly of inferior quality and hard to sell. The better types were, however, making firmer prices.

This report will be sent free monthly as issued on application being made to the Secretary, Ministry of Agriculture, Stormont, Belfast.

17*th September*, 1936.

ULSTER DAIRY SCHOOL, COOKSTOWN.

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MINISTRY OF AGRICULTURE.

List of Leaflets and other Publications.

LEAFLETS.

No 1. Flax Seed, 1936.
" 2. Improvement of Farm Poultry.
" 3. Feeding for Egg Production.
" 4. Marketing of Eggs.
" 5. The Dishorning of Calves.
" 6. The Packing of Apples in Standard Boxes.
" 7. Potato Trials.
" 8. Seed Testing for Farmers.
" 9. The Renovation of Orchards.
" 10. Fruit Tree Pests—Capsid Bugs.
" 11. Fruit Tree Pests—Aphides and Apple Sucker.
" 12. Fruit Tree Pests—Caterpillars
" 13 Contagious Abortion in Cattle.
" 14. Cheese-making on the Farm.
" 15. Suitable Varieties of Fruit.
" 16. The Feeding of Dairy Cows.
" 17. Home Bottling of Fruits and Vegetables.
" 18. Marketing of Dead Poultry.
" 19. How to Feed Linseed.
" 20. The Hatching and Rearing of Chickens.
" 21. The Uses and Advantages of Portable Poultry Houses.
" 22. Leather-Jacket Grubs.
" 23. The Handling and Care of Wool.
" 24. Fluke in Sheep.
" 25. The Rearing and Management of Young Horses.
" 26. Ordnance Survey Maps for Farmers.
" 27. How to Keep Eggs Clean
" 28. The Construction of a Laying House for Poultry.
" 29. The Selection and Breeding of Laying Hens.
" 31. Coccidiosis in Poultry.
" 32. Roup of Poultry (Fowl Pox).
" 33. Spraying Calendar for Apple Orchards.
" 34. The Pruning of Apple Trees.
" 35 The Fattening of Pigs.
" 36. Advantages of Milk Recording.
" 37. The Raising and Fattening of Turkeys.
" 38. The Destruction of Charlock.
" 39. The Production of Clean Milk.
" 40. The Laying Down and Management of Temporary Pastures.
" 41. Blackleg, Blackquarter or Quarterill.
" 42. The Purchase of Balanced Rations for Dairy Cows.
" 43. Tuberculosis in Poultry.
No. 44. Results of Crop Experiments, 1935.
" 45. The Breeding and Rearing of Pigs.
" 46. Hints for Winter Egg Production.
" 47. The Care and Management of Sheep.
" 49. American Gooseberry Mildew.
" 50. Potato Blight.
" 51. Butter-making on the Farm.
" 52. Gapes in Chickens.
" 54 The Breeding and Rearing of Calves.
" 55. Destruction of Ragwort or Benweed.
" 56. Identification of Egg Supplies.
" 57. How to have Eggs of First Quality.
" 58. How the Fertilisers and Feeding Stuffs Act benefits the Farmer.
" 59. Bacillary White Diarrhoea (Pullorum Disease).
" 60. Advantages of Winter Agricultural Classes.
" 61. The Care and Management of Breeding Bulls.
" 62. The Production of Timber on the Farm.
" 63. Sheep—Castration, Docking, Foot-Rot and Care of Feet.
" 64 The Destruction of Warble Fly Maggots in Cattle.
" 65. The Packing of Apples in Barrels.
" 66. Seed Testing Facilities for Traders.
" 67. The Cultivation of Vegetables.
" 68. The Cultivation of Strawberries.
" 69. The Construction of Piggeries.
" 70. Ringworm.
" 71. The Cultivation of Raspberries.
" 72. Tree Planting for Shelter and Ornament.
" 73. The Propagation and Maintenance of Healthy Stocks of Potatoes.
" 74. New Pure Strains of Flax.
" 75. Pig Production and the Pigs Marketing Scheme.
" 76. Acarine (Isle of Wight) Disease of Bees.
" 77. Licensing of Milk Producers and Distributors.
" 78. Graded Milk.
" 79. The Picking and Storing of Apples.
" 80. Hoose or Husk in Farm Stock.
" 81. The Construction of Cow Houses.
" 82. White Scour in Calves.
" 83. The Care, Management and Feeding of the Poultry Breeding Stock.

Any of the above leaflets may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

CIRCULARS.

No. 1. Phosphatic Fertilisers.
" 5. Why Pay a Tax on the Horns of Cattle ?
" 8. Basic Slag.
" 9. Smut in Oats.
" 10. Purchase of Fertilisers and Feeding Stuffs.
" 11. Fertilisers and Feeding Stuffs Act—General Summary.
" 12. The Treatment of Liver Fluke.
" 13. The ox-Warble Fly.
" 306. Fertilisers and Feeding Stuffs Act, 1926—Revision of Regulations.

MISCELLANEOUS PUBLICATIONS.

Store Cattle.
Reports on Egg-Laying Tests.
Crop Insurance.
List of Growers of Certified Crops of Immune Varieties of Potatoes.
List of Growers of Certified Crops of Non-Immune Varieties of Potatoes
The Ministry's Monthly Report.
Register of Premium Stallions.
Guide to the Live Stock Breeding Act (Northern Ireland), 1922.
Guide to the Marketing of Fruit Act (Northern Ireland), 1932.

Any of the above publications may be obtained free of charge and post free on application to the Secretary, Ministry of Agriculture, Stormont, Belfast.

The following publications can be obtained from His Majesty's Stationery Office, 80 Chichester Street, Belfast, at the prices stated :—

(1) The Annual Report of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(2) Annual Report upon the Agricultural Statistics of Northern Ireland. Price 2/- net.
(3) The Journal of the Ministry of Agriculture for Northern Ireland. Price 2/6 net.
(4) The Agricultural Output of Northern Ireland, 1925. Price 2/6 net.

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